SONY®

DIGITAL TIME BASE CORRECTOR
DIGITAL-ZEITBASIS-AUSGLEICHSGERÄT

BVT-500P

OPERATION AND MAINTENANCE MANUAL
BEDIENUNGS- UND WARTUNGSANLEITUNG

2nd Edition (Revised 6)
Serial No. 10101 and Higher

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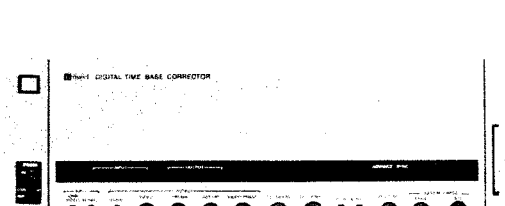
BVT-500P



U-matic Professional

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SECTION 1
OPERATION

1-1 FEATURES

- The BVT-500P is a time base corrector which is specially designed for under colour type VTRs, and it serves to convert playback signals from U-matic H and U-matic VTRs into signals that conform to broadcasting specifications.
- Correction range is 3.5 Hp-p .
  The BVT-500P can be used to correct jitter in the VTR output within the correction ranges given above.
- Interfacing is possible with U-matic H and U-matic VTRs using the DUB connectors, and a high picture quality is yielded.
- The BVT-500P provides composite video output and non-composite video output signals.
- An 8-bit analog-digital converter is adopted in the base band for both luminance and chrominance, and this helps to provide a high picture quality.
- The Y/C delay control on the front panel allows a continuously variable compensation across a 300 nsec p-p range.
  For compensation above this range, the thumbwheel switch on the printed circuit board can give a compensation of ±1 μsec at 250 nsec/step.
- A perfect dropout compensation effect is assured with the replacement of the dropout sections with 1H prior data featuring a very high correlation with both the luminance and chrominance signals.
  Furthermore, the signals are processed digitally and so this stable operation requires no adjustments.
- With the bidirex function colour pictures can be viewed at a speed which is twice as fast or twice as slow as the normal speed.
- Diferential gain produced by the VTR can be linearly compensated for across a range of ±20%.
- The lines adjoining the chroma can be added and the chroma noise improved by 3 dB. (Colour Line Averaging)
- The chroma level can be controlled across a range of ±3 dB.
- The BVT-500P processes both the luminance and chrominance signals at the base band and then finally encodes them so that the output signals always meet the requirements of the broadcasting standards.
- It is possible to cancel out any undesired H-line signal in the vertical blanking.

1-2. SPECIFICATIONS

1-2-1. General

Power requirements	AC 100/120/220/240 V ±10%, 50/60 Hz (48–64 Hz)
Power consumption	240 W max.
Operating temperature	0°C – 40°C
Humidity	10% – 90% (non condensed)
Weight	Approx. 30 kg

1-2-2. Video

Bandwidth	Luminance $^{+0.5}_{-1.0}$ dB, 3MHz (DUB IN) $^{+0.5}_{-2.0}$ dB, 3MHz (OFF TAPE VIDEO) Chrominance ±0.5 dB, 650 kHz
Signal-to-noise ratio	55 dB p-p video to RMS noise
Differential gain	2%
Differential phase	2°
Transient response (K-factor)	4%
Correction range (window)	3.5 lines p-p
Residual error	Colour: ±2.5 nsec Luminance: ±15 nsec

1-2-3. Input signals

Video (to be corrected)	
Off tape video	composite video sync negative 1.0 Vp-p ±3 dB, 75 ohms
Dub in	Luminance 0.5 Vp-p, 75 ohms Chrominance 0.5 Vp-p, 75 ohms
Reference video	1.0 Vp-p ±3 dB, 75 ohms
Dropout compensator reference signal	Off tape RF signal 0.5 Vp-p ±3 dB, 75 ohms

1-2-4. Output signals

Video (corrected)	
Video-1	1.0 Vp-p composite video, 75 ohms, sync negative
Video-2	1.0 Vp-p composite video, 75 ohms, sync negative
Video-3	0.7 Vp-p non-composite video or 1.0 Vp-p composite video
Dub out	Luminance: 0.5 Vp-p, 75 ohms Chrominance: 0.5 Vp-p, 75 ohms
Advanced sync	2.0 V ± 0.4 Vp-p, composite sync, 75 ohms
Reference video	1.0 Vp-p, 75 ohms

1-2-5. Processor adjustment range

Output video level	±3 dB
Set-up level	±0.035V (±5%)
Chroma level	±3 dB
Video phase	±1.0 μsec
System SC phase	±180°
System sync phase	3 μsec Advance to 1 μsec Delay
Advanced sync phase	3.0 H ±5 H
Chrominance/Luminance delay adjustment	±150 nsec (continuously adjustable) ±1 μsec (250 nsec/step adjustment on board)
DG compensation	±20%

1-3. INSTALLATION INSTRUCTIONS

1-3-1. Installation location

- Install the BVT-500P in a location which is dry and well ventilated.
- Do not install in a room with a high temperature or near a heat source.
- Avoid installation in dusty areas or areas which are subjected to vibration.
- Avoid areas where high electric or magnetic fields are to be found.
- Avoid areas where the BVT-500P will be exposed to direct sunlight, other strong lights or flashes of light.

1-3-2. Installation conditions

- Ensure that a gap of at least 30 cms is left between the rear connector panel and any adjacent surface.
- Do not bring cables or any other objects into contact with the metal netting of the rear panel ventilator.
- Bear in mind the following points when rack mounting.
  Do not install the BVT-500P over any power supplies or other equipment which radiates heat.
  When mounting equipment into the same rack below the BVT-500P, leave a clearance of at least 30 cm between the units.

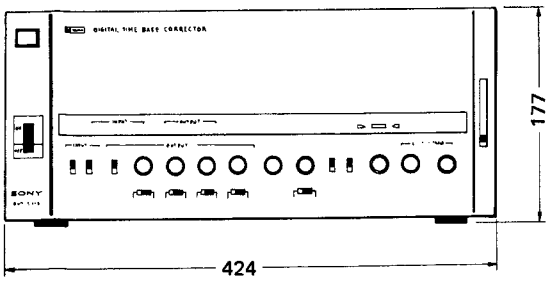
1-3-3. Pre-operational check list

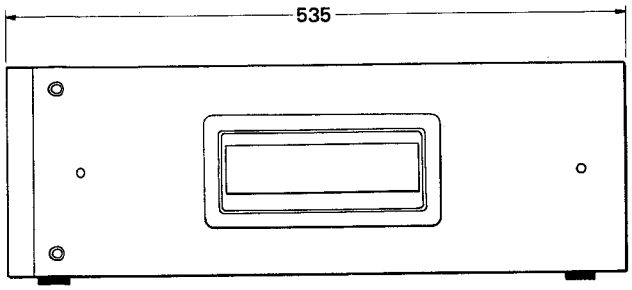
1) Confirm that the VOLTAGE SELECTOR on the connector panel is set to the line voltage of your area.
2) Check that the POWER switch is at the OFF position.
3) Install the BVT-500P in a rack or location which meets the conditions outlined above.
4) Check the input and output lines.
5) Open the front control panel and check that all the printed circuit boards have been inserted correctly.
   Check that the board location number (at the botton of the frame) tallies with the board number (underneath the board).
6) Turn the POWER switch on, and set all the controls, variable resistors and switches to their proper positions in accordance with the instructions given later in this manual.

1-3-4. Operating precautions

- When inserting and removing the printed circuit boards, check the slot number (at the bottom of the frame) and the board number (underneath the board), and always insert in the proper location.

Dimensions



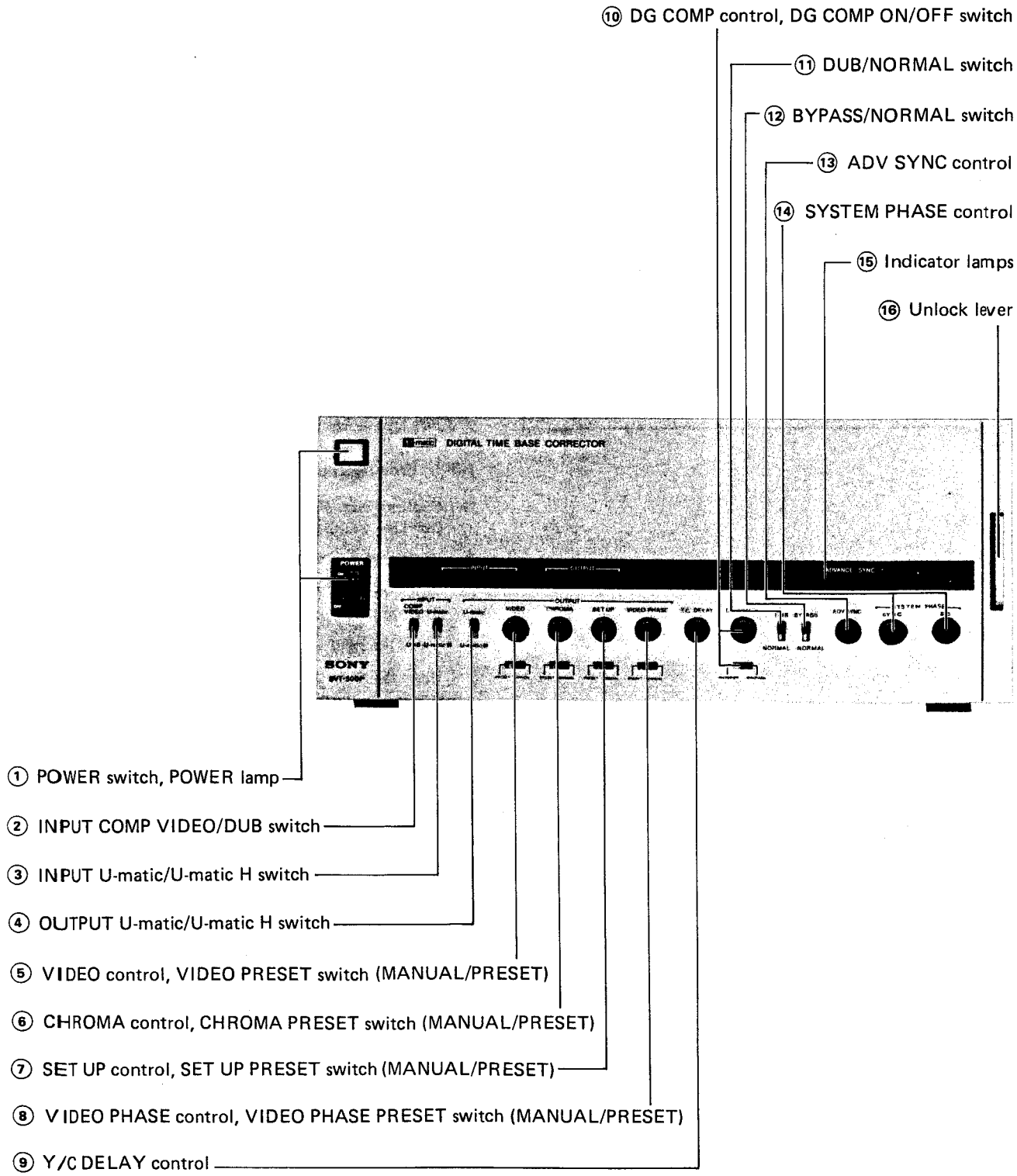


Unit : mm

1-4. OPERATION CONTROLS

1-4-1. Control panel

The switches and controls which are regularly used are all located on the front control panel.



① **POWER switch, POWER lamp**
When the POWER switch is turned on, the POWER lamp comes on and the power is supplied to the circuitry.

② **INPUT COMP VIDEO/DUB switch**
This selects the input signals.
Use this switch to select between composite video signals which are fed in through the BNC (IN) connector and DUB input signals fed in through the multiple (DUB) connector.

③ **INPUT U-matic/U-matic H switch**
This switch works when the ② INPUT COMP VIDEO/DUB switch has been set to the DUB position. Specify in accordance with the input signal (i.e. playback tape) format.

④ **OUTPUT U-matic/U-matic H switch**
This switch is used to determine whether the DUB connector output format is to be set to the U-matic VTR or U-matic H VTR. It has no effect on the composite video signal output.

⑤ **VIDEO control,**
VIDEO PRESET switch (MANUAL/PRESET)
MANUAL: This enables the video level of all the output signals to be adjusted within a range of ±3 dB.
PRESET: The video level of the output signals is set to the reference level regardless of the position of the VIDEO control.

⑥ **CHROMA control,**
CHROMA PRESET switch (MANUAL/PRESET)
MANUAL: This control allows the output chroma level to be adjusted within a range of ± 3 dB.
PRESET: The BVT-500P output chroma level is set to the reference level regardless of the position of the CHROMA control.

⑦ **SET UP control,**
SET UP PRESET switch (MANUAL/PRESET)
MANUAL: This control allows the output set-up level to be adjusted within a range of ±0.035V (±5%).
PRESET: The BVT-500P set-up is set to 0 regardless of the position of the SET UP control.

⑧ **VIDEO PHASE control,**
VIDEO PHASE PRESET switch (MANUAL/PRESET)
MANUAL: This control allows the phase relative to the video and sync signals (output video phase) to be adjusted continuously across a range of ±1 μsec.
PRESET: The relative phase (output video phase) is set to the reference level regardless of the position of the VIDEO PHASE control.

⑨ **Y/C DELAY control**
This control allows the output video luminance and chrominance relative phase to be varied continuously over a range of ±150 nsec.
For a variation above ±150 nsec, adjust using the thumbwheel switch on the MY printed circuit board inside the BVT-500P.

⑩ **DG COMP control, DG COMP ON/OFF switch**
ON: The differential gain of the BVT-500P output can be compensated for linearly across a ±20% range.
OFF: The differential gain compensation function is deactivated.

⑪ **DUB/NORMAL switch**
This switch is used to select the mode of use. Select the mode for dubbing or for signal processing. If this switch is set to the DUB position, all the output controls are forcibly set to the PRESET mode.

⑫ **BYPASS/NORMAL switch**
NORMAL: Normal time-corrected output signals appear in the BVT-500P's outputs.
BYPASS: The OFF TAPE VIDEO input signal is bypassed to the VIDEO-1 output connector.

⑬ **ADV SYNC control**
The advanced sync phase can be adjusted across a range of ±5 lines with this control. Adjust it so that the ADVANCE SYNC indicator lamp lights up in green.

⑭ **SYSTEM PHASE controls**
These controls are used to adjust the SYNC phase and SC phase of the TBC output, with respect to the BVT-500P's reference input, across a range of 3 μsec advance phase to 1 μsec delayed phase.
The SYNC phase and the SC phase can be adjusted independently.

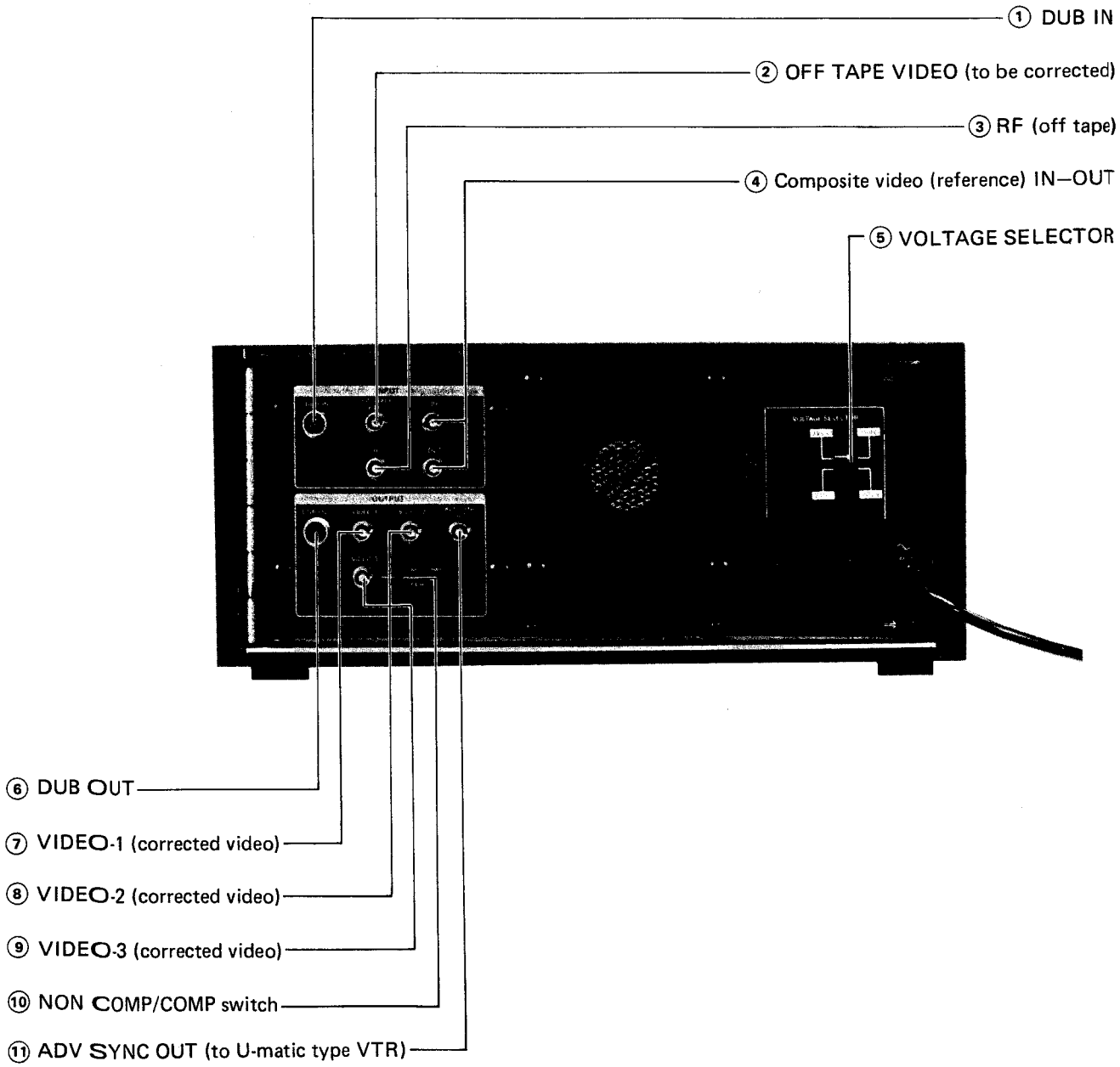
⑮ **Indicator lamps**
These indicate the operating mode of the BVT-500P.

⑯ **Unlock lever**
Push the bottom of the lever, tilt it and pull out in front. It is then possible to open the front control panel out towards the left.

Processor adjustment

INPUT	OUTPUT	PROCESSOR ADJ.			
COMP VIDEO/ DUB sw	NORMAL/ DUB sw	VIDEO LEVEL	CHROMA LEVEL	SET-UP LEVEL	NOISE-CANCELLOR
COMP VIDEO	NORMAL	ENABLE	ENABLE	ENABLE	OFF
COMP VIDEO	DUB	ENABLE	ENABLE	ENABLE	OFF
DUB	NORMAL	ENABLE	ENABLE	ENABLE	ON
DUB	DUB	ENABLE	ENABLE	ENABLE	OFF

1-4-2. Connector panel



Notes on connections

- Connect the VTR and time base corrector with the DUB cables which are supplied with the VTR, and for all the other input and output signal connections, use BNC connectors.
- It is possible to set the VIDEO-3 output to composite video or non-composite video by selecting the ⑩ NON COMP/COMP switch.
- To gen lock the BVT-500P to external reference video signal, connect the composite video signal for reference applications.

INPUT/OUTPUT connector specifications

CONNECTOR	DESCRIPTION
INPUT	
① DUB IN	Special multiple connector
② OFF TAPE VIDEO (to be corrected)	BNC, 1 Vp-p, 75 ohms
③ RF (off tape)	BNC, 0.5 Vp-p, 75 ohms
④ Composite video (reference) IN–OUT	BNCs, 1 Vp-p, 75 ohms
OUTPUT	
⑥ DUB OUT	Special multiple connector
⑦ VIDEO-1 (corrected video)	BNC, 1 Vp-p, 75 ohms
⑧ VIDEO-2 (corrected video)	BNC, 1 Vp-p, 75 ohms
⑨ VIDEO-3 (corrected video)	BNC, non composite video/ composite video, 1 Vp-p
⑪ ADV SYNC OUT (to U-matic type VTR)	BNC, 2 Vp-p, 75 ohms

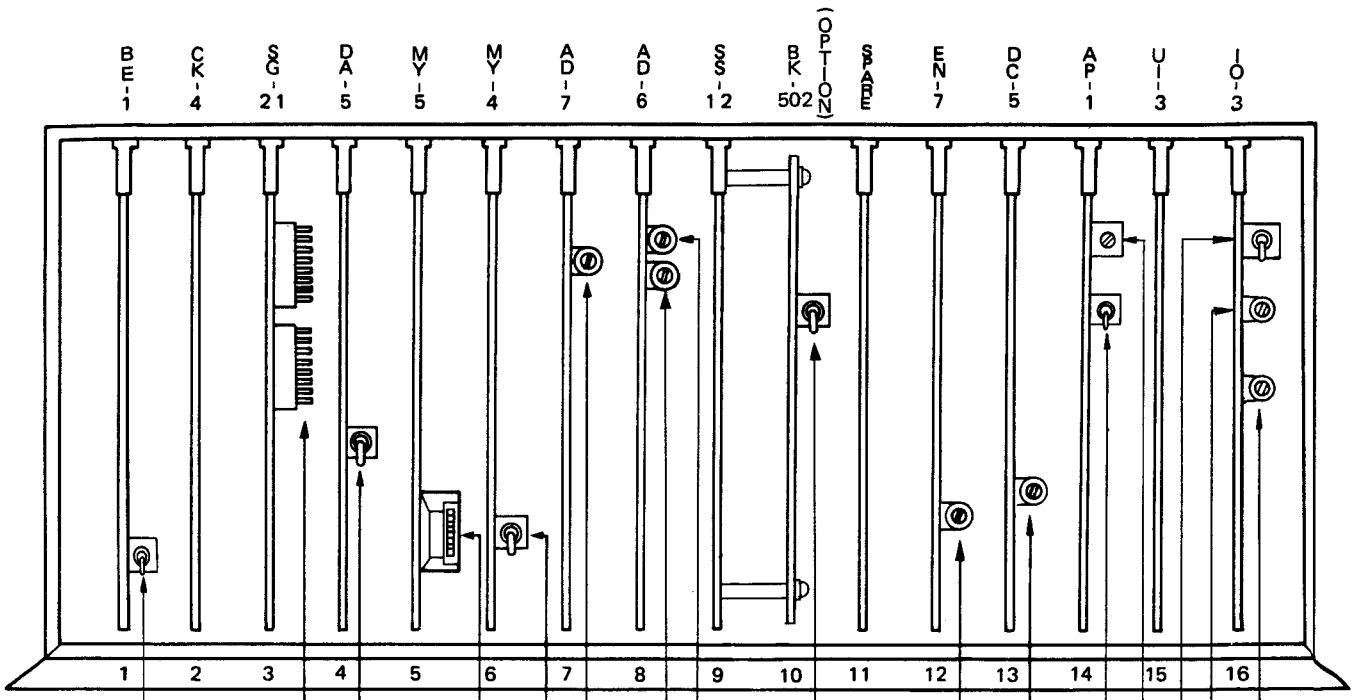
Voltage selection

To set the input voltage (100/120/220/240 V ±10%, 48 to 64 Hz), remove the lock screw of the ⑤ VOLTAGE SELECTOR using a screwdriver, set the selector to the prescribed voltage and then tighten up the screw again.

Breakers

When no power is supplied to the BVT-500P, open up the ⑤ VOLTAGE SELECTOR cover and inspect the breakers. If the breakers are OFF, set them to ON but if they return to OFF after the power is supplied, inspect the power supply and voltage. If nothing appears wrong, contact the Sony broadcasting services.

1-4-3. Printed circuit boards



⑭ BEAT CANCELLER switch

① V BLANKING DIP switch

② NOISE CANCELLER switch

③ Y/C DELAY switch (for coarse adjustment)

④ CHROMA LINE ADD switch

⑤ CHROMA A/D conversion range vr (VR-2)

⑥ LUMINANCE A/D conversion range vr (VR-4)

⑥ LUMINANCE A/D conversion range vr (VR-5)

⑦ BURST POSITION vr (VR-8)

⑧ DECODE PHASE vr (VR-4)

⑨ INERTIA SELECT switch

⑩ INPUT LEVEL PRESET/MANUAL switch

⑪ INPUT LEVEL control

⑫ REC CURRENT vr

⑬ COLOUR LOCK control (VR-7)

⑮ LOCK MODE SELECT switch

① **V BLANKING DIP switch (3. SG-21 board)**
This is a DIP switch which is used to cancel out any undesired piece of signals on the H lines in the vertical blanking.

② **NOISE CANCELLER switch (4. DA-5 board)**
When the DUB/NORMAL switch on the front panel is set to NORMAL and the INPUT COMP VIDEO/DUB switch is set to DUB , the noise canceller is set to ON automatically. However, if this switch is set to OFF, the noise canceller will be inhibited regardless of the mode.

③ **Y/C DELAY switch (for coarse adjustment) (5. MY-5 board)**
This thumbwheel switch allows the luminance and chrominance relative phase to be adjusted in units of 250 nsec.
(Use the Y/C DELAY control on the front panel for fine adjustments.)

④ **CHROMA LINE ADD switch (6. MY-6 board)**
The signal-to-noise ratio of the chroma signals can be improved by 3 dB by adding the chroma lines.

⑤ **CHROMA A/D conversion range vr (7. AD-7 board)**
VR-2 on the AD-7 board determines the chroma analog-to-digital conversion range. However, it should not be touched unless the BVT-500P has broken down or failed.

⑥ **LUMINANCE A/D conversion range vrs (8. AD-6 board)**
VR-4 and VR-5 determine the luminance analog-to-digital conversion range. However, they should not be touched unless the BVT-500P has broken down or failed.

⑦ **BURST POSITION vr (12. EN-7 board)**
This variable resistor (VR-8) makes it possible to adjust the burst flag phase of the output video signal.

⑧ **DECODE PHASE vr (13. DC-5 board)**
When an under colour VTR is being used, there are sometimes shifts from the burst phase. In cases like this, the signal-to-noise ratio appears poor on the monitor. Therefore, adjust this variable resistor (VR-4) so that the BVT-500P output video burst and chroma relative phases are set properly.

⑨ **INERTIA SELECT switch (14. AP-1 board)**
Normally, set the switch to 32-LINE.
If the colour flash symptoms, resulted from frequent dropouts occurrence, happen, set the switch to 64-LINE.

⑩ **INPUT LEVEL PRESET/MANUAL switch (16. IO-3 board)**
Normally, set the switch to PRESET.
When a input signal is the signal with the distorted sync such as a multi-generated tape playback signal, set the switch to MANUAL. Then adjust the ⑪ INPUT LEVEL control while minitoring the TBC VIDEO OUTPUT signal.

⑪ **INPUT LEVEL control (16. IO-3 board)**

⑫ **REC CURRENT vr (16. IO-3 board)**
This vr makes it possible to adjust the chroma level of the DUB OUT.

⑬ **COLOUR LOCK control (14. AP-1 board)**
When the INPUT VIDEO/DUB switch is set at DUB, if the picture should suddenly lose colour or does not maintain correct hue, adjust the COLOUR LOCK control. Turn this variable resistor slowly to the left or right until a normal picture is restored.

⑭ **BEAT CANCELLER switch (1. BE-1 board)**
When the beat is pronounced, it can be decreased by turning the cancel switch on the BE-1 board ON (up).
If the cancel switch is kept in the ON position, and the dubbing operation is repeated several times, the image may be degraded. Because of this, preliminary dubbing should be done with the cancel switch in the OFF position, and only turned ON during final dubbing.

⑮ **LOCK MODE SELECT switch (BG-3 board on the 9. SS-12 board)**
This switch on the BG-3 board (optional BK-502 black burst generator) selects the lock mode.
INT : To gen lock the BVT-500P to the internal reference signal from the black burst generator
EXT : To gen lock the BVT-500P to the external reference video signal

1-5. BK-502 BLACK BURST GENERATOR (OPTIONAL)

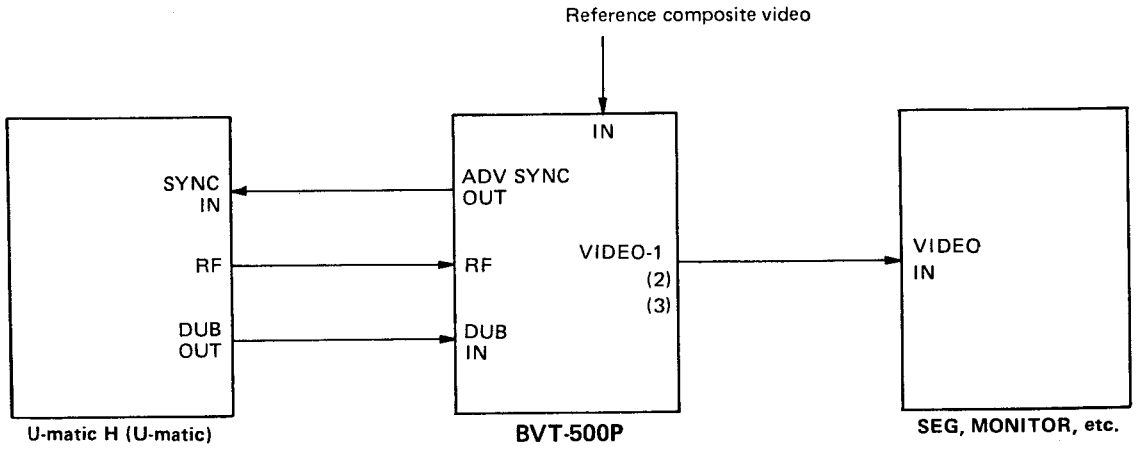
By mounting the BK-502 black burst generator (BG-3 board), the BVT-500P can be gen locked to the internal reference signal generated by the BK-502.
The black burst signal can be obtained from the reference video OUT connector (at the rear) and used as a reference signal for other video equipment.

1-6. SIGNAL CONNECTIONS

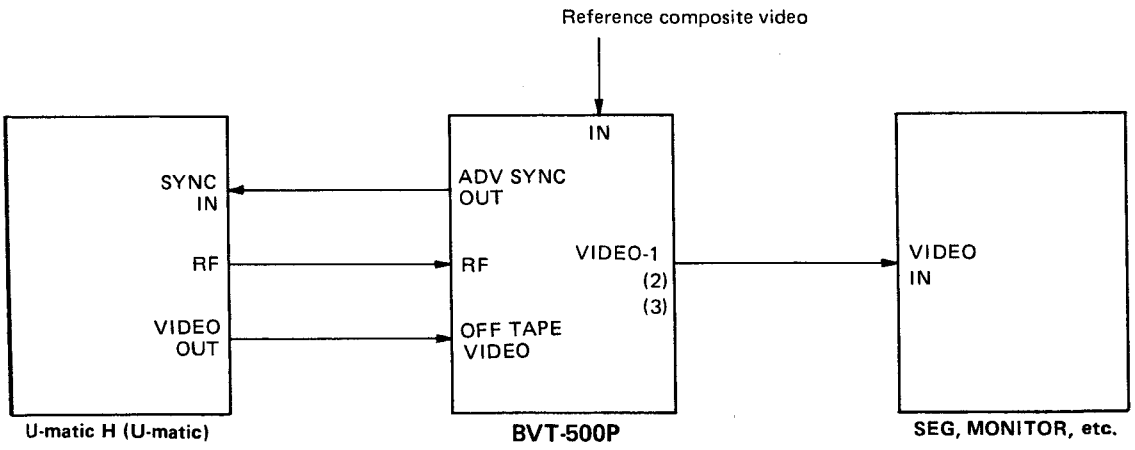
The most common operational modes of use are shown in the following diagrams. The required connections are clearly shown in each case.

1) Standard connections

a) Connection with U-matic H (or U-matic) VTR having DUB OUT connector

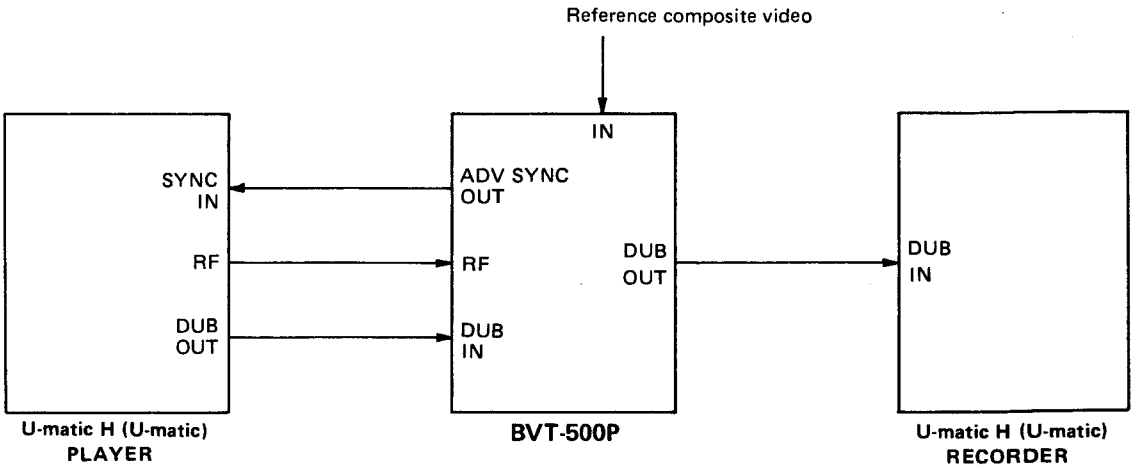


b) Connection with U-matic H (or U-matic) VTR without DUB OUT connector and with other under colour VTRs



2) **Dubbing**

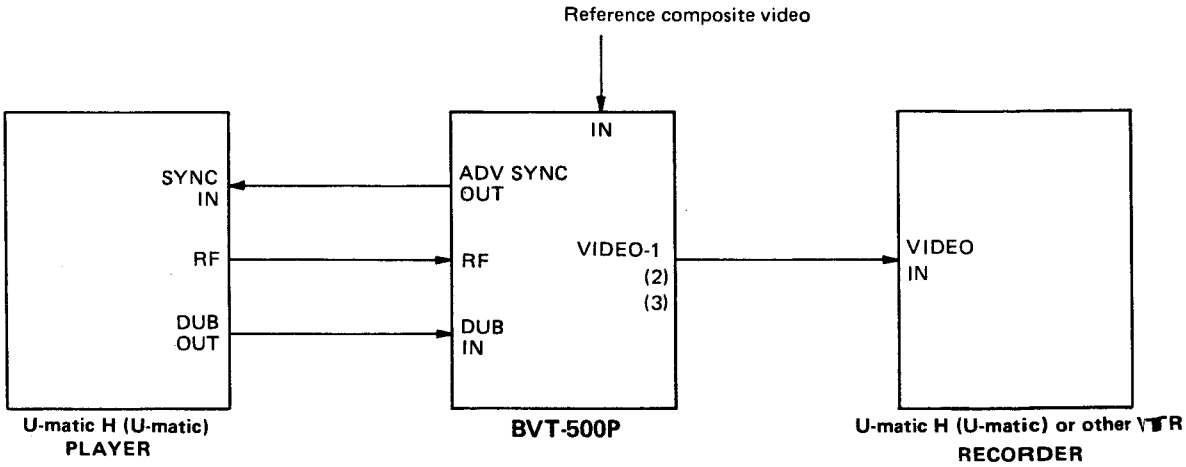
a) When both player and recorder have DUB connectors



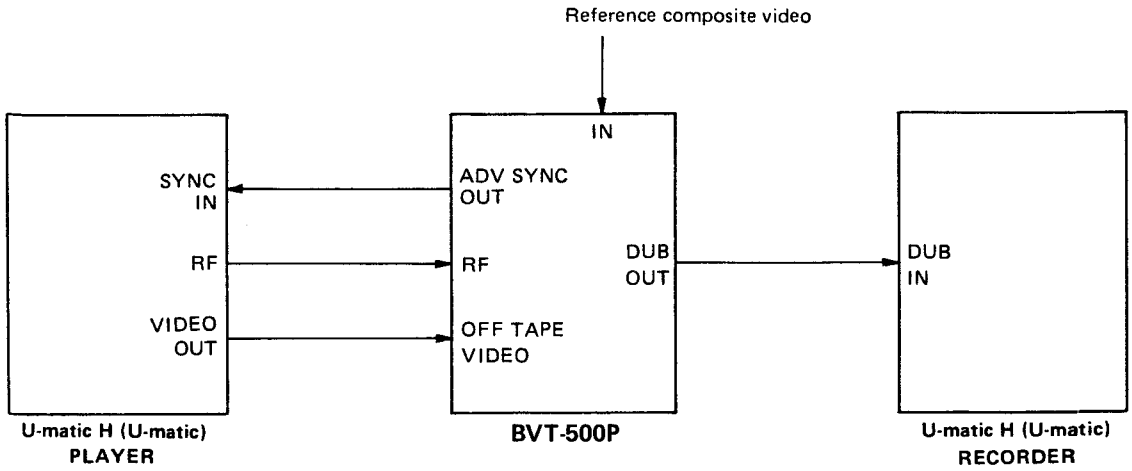
Note: By selecting the input and output modes of the BVT-500P, dubbing is possible using the DUB connectors for:

U-matic H ⟶ U-matic H, U-matic H ⟶ U-matic
U-matic ⟶ U-matic H, U-matic ⟶ U-matic

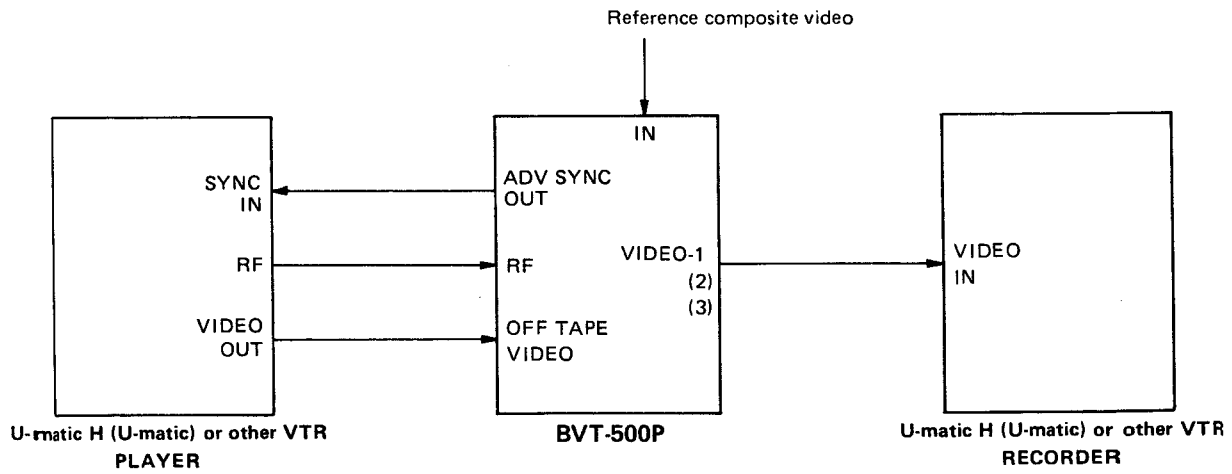
b) When player has DUB OUT connector but recorder does not have DUB IN connector



c) When player does not have DUB OUT connector but recorder has DUB IN connector

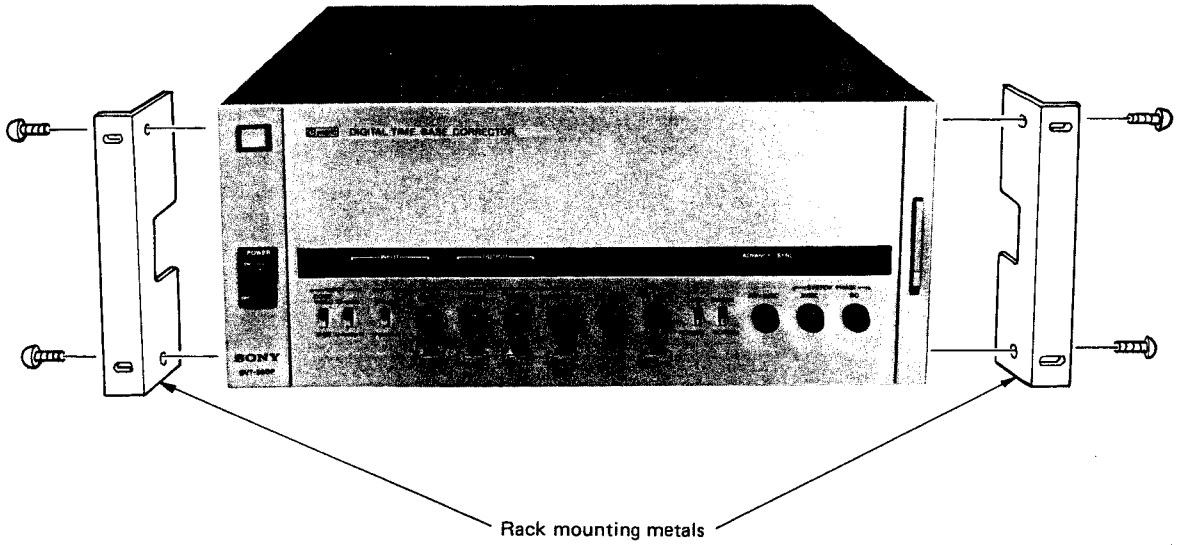


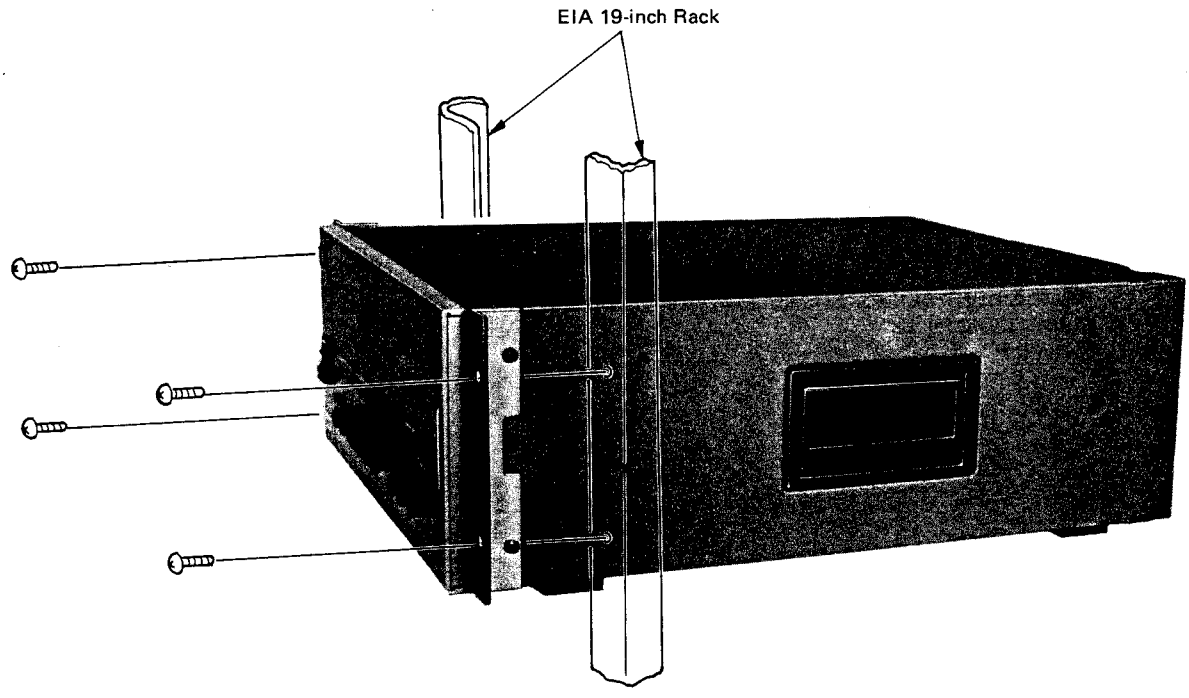
d) When both player and recorder do not have DUB connectors



1-7. RACK MOUNTING

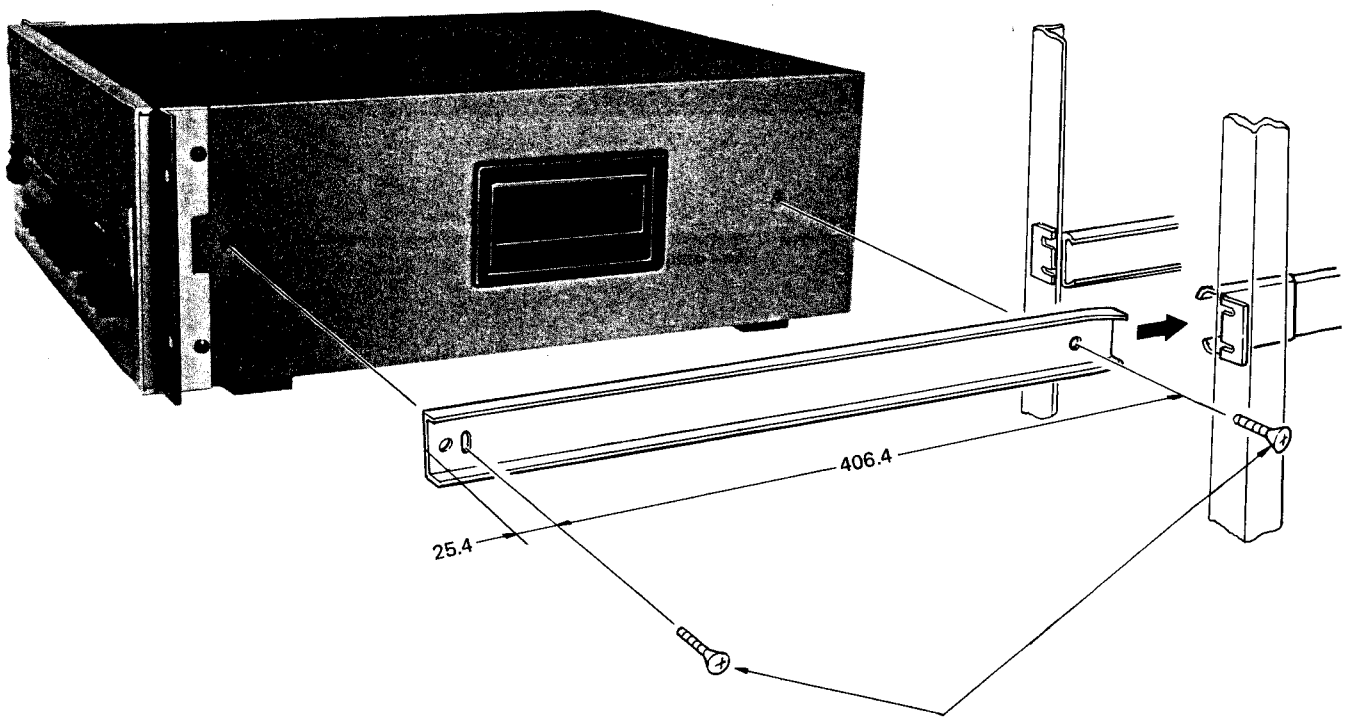
The BVT-500P can be rack mounted in a standard 19-inch rack by attaching the rack mounting metals to the sides of the cabinet. Unscrew the screws on both sides (total of 4). Then secure the supplied rack mounting metals with the original screws as shown in the photo below.





Tighten screws on both sides of rack.

1-8. SLIDE RAIL MOUNTING



Manufacturer: ACCURIDE
Model: RACK-MOUNT SLIDES MODEL 203
SLIDE LENGTH 22"

- When transporting the BVT-500P with a car, be sure to mount it to the rack with the slide rails and rack mounting metals.
- In other cases, it is also recommended to mount the BVT-500P to the rack with the slide rails and rack mounting metals for easier attachment, removal and servicing.

ABSCHNITT 1
BEDIENUNG

1-1. MERKMALE

- Modell BVT-500P ist ein Zeitbasis-Ausgleichsgerät, das speziell für die Verwendung mit Farb-Videorecorders (VTR) entwickelt wurde und zur Umwandlung der Wiedergabesignale von U-matic H oder U-matic Bildbandgeräten in Signale, die den Anforderungen für Sendezwecke entsprechen, dient.
- Korrekturbereich 3,5 H_{s-s}.
  Modell BVT-500P kann zur Korrektur von Jitter der Ausgangssignale des Video-Recorders im angegebenen Bereich verwendet werden.
- Überspielen zwischen einem U-matic H und U-matic Videorecorder ist über die DUB-Stecker möglich, wobei hohe Bildqualität erzielt wird.
- Modell BVT-500P liefert BAS-Ausgangs- und Nicht-BAS-Ausgangssignal, so daß große Freiheit bei der Systemkonfiguration gewährleistet ist.
- Ein 8-Bit Analog/Digital-Wandler wird im Basisband für das Luminanz- und das Chrominanzsignal verwendet, was zu hoher Bildqualität beiträgt.
- Der auf der Fronttafel angebrachte Y/C-Verzögerungsregler ermöglicht eine stufenlose Kompensation über einen Bereich von 300 $nsek._{s-s}$. Zur Kompensation über diesen Bereich hinaus kann der Daumenradschalter auf der gedruckten Leiterplatte im Bereich von ±1 µsek. in Schritten von 250 nsek. verwendet werden.
- Perfekte Signalausfall- und Beschichtungsfehler-Kompensation ist gewährleistet durch Ersetzen der ausgefallenen Teile durch um 1H vorangegangenen Daten mit sehr hoher Korrelation zu den Luminanz- und Chrominanz-Signalen. Die Signale werden digital verarbeitet, so daß keine Einstellung für stabilen Betrieb erforderlich ist.
- Ausgerüstet mit Wahlschalter, um Farbbilder mit doppelter oder halber Normalgeschwindigkeit reproduzieren zu können.
- Der durch den Video-Recorder erzeugte Differentialgewinn kann im Bereich von ±20% linear kompensiert werden.
- Die neben dem Chroma-Signal angrenzenden Zeilen können hinzugefügt werden, wodurch der Chroma-Störabstand um 3 dB verbessert werden kann (Colour Line Averaging).
- Regelung des Chroma-Pegels im Bereich von ±3 dB möglich.
- Modell BVT-500P bereitet sowohl die Luminanz- als auch die Chrominanz-Signale am Basisband auf und kodiert sie anschließend, so daß die Ausgangssignale immer den Anforderungen der Sendenormen entsprechen.
- Unerwünschte Signalteile in den H-Zeilen der Bildaustastung können bei der Vertikal-Austastung unterdrückt werden.

1-2. TECHNISCHE DATEN

1-2-1. Allgemeines

Stromversorgung	100/120/220/240 V, Wechselspannung ±10% 50/60 Hz (48–64 Hz)
Leistungsaufnahme	240 W (max.)
Betriebstemperatur	0°C bis 40°C
Zul. Luftfeuchtigkeit	10–90% (ohne Kondensat)
Gewicht	ca. 30 kg

1-2-2. Video

Bandbreite	Luminanz: $^{+0,5}_{-1,0}$ dB, 3,0MHz (Dub-in) $^{+0,5}_{-2,0}$ dB, 3,0MHz (OFF TAPE VIDEO) Chrominanz: ±0,5 dB, 650 kHz
Signal-Rauschabstand	55 dB_{s-s} Video zu RMS-Rausch
Differentialgewinn	2%
Differentialphase	2°
Einschwingverhalten (K-Faktor)	4%
Korrekturbereich (Ausblendstufe)	3,5 $Zeilen_{s-s}$
Restfehler	Farbe: ±2,5 nsek. Luminanz: ±15 nsek.

1-2-3. Eingangssignale

Video (zur Korrektur)	
Ab Video-Magnetband	BAS-Signal Negatives Synchronsignal 1,0 V_{s-s}, ±3 dB, 75 Ohm
Dub-in	Luminanz 0,5 V_{s-s}, 75 Ohm Chrominanz 0,5 V_{s-s}, 75 Ohm
Bezugsvideo	1,0 V_{s-s} ±3 dB, 75 Ohm
Bezugssignal des Signalausfall-Kompensators	HF-Signal vom Video-Magnetband 0,5 V_{s-s} ±3 dB, 75 Ohm

1-2-4. Ausgangssignale

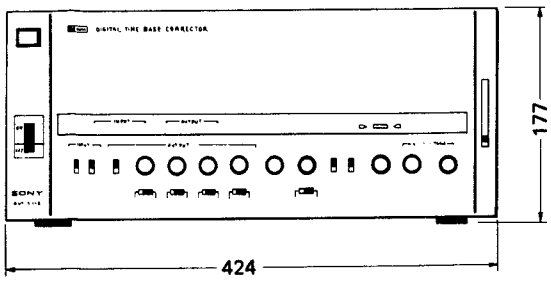
Video (korrigiert)	
Video 1	1,0 V_{s-s}, BAS-Signal, 75 Ohm, negative Synchronisierung
Video 2	1,0 V_{s-s}, BAS-Signal, 75 Ohm, negative Synchronisierung
Video 3	0,7 V_{s-s} Nicht-BAS-Signal oder 1,0 V_{s-s} BAS-Signal
Dub-out	Luminanz: 0,5 V_{s-s}, 75 Ohm Chrominanz: 0,5 V_{s-s}, 75 Ohm
Vorgezogene Synchronisierung Bezugsvideo	2,0 V ±0,4 V_{s-s}, BAS-Signal, 75 Ohm 1,0 V_{s-s}, 75 Ohm

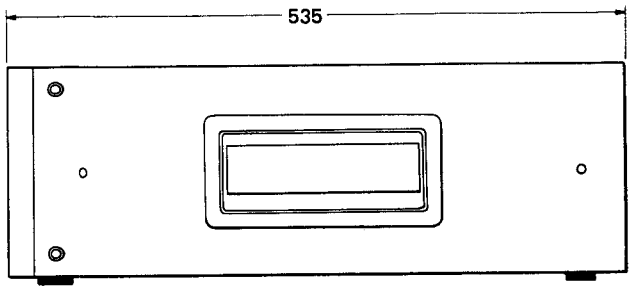
1-2-5. Prozessor-Einstellbereich

Video-Ausgangspegel	±3 dB
Einstellpegel	±0,035V (±5%)
Chroma-Pegel	+3 dB
Video-Phase	±1,0 µsek.
SC-Phase	±180°
Synchron-Phase	3 µsek Voreilung bis 1 µsek Verzögerung
Vorgezogene Synchronphase	3,0 H ±5 H
Einstellung der Chrominanz/Luminanz-Verzögerung	±150 nsek. (stufenlos einstellbar) ±1 µsek. (in Schritten von 250 nsek. auf Leiterplatte einstellbar)
DG-Kompensation	±20%

1-3. AUFSTELLUNGANLEITUNG

Abmessungen





Einheit : mm

1-3-1. Aufstellungsort

- Modell BVT-500P nur an einem trockenen und gut belüfteten Ort aufstellen.
- Nicht in einem Raum mit hohen Temperaturen oder in der Nähe von Wärmequellen aufstellen.
- Nicht an Orten aufstellen, die Staub und Vibrationen ausgesetzt sind.
- Aufstellungsorte in der Nähe von starken elektrischen oder magnetischen Kraftfeldern vermeiden.
- Modell BVT-500P nicht dort aufstellen, wo es direkter Sonnenbestrahlung aufstellen; auch andere starkem Licht oder Blitzlicht ausgesetzt ist.

1-3-2. Aufstellungsbedingungen

- Darauf achten, daß zwischen der auf der Rückseite angebrachten Anschlußtafel und der benachbarten Flächen ein Mindestabstand von 30 cm eingehalten wird.
- Keine Kabel oder andere Gegenständen mit dem Metallgitter des auf der Rückseite angebrachten Ventilators in Kontakt bringen.
- Beim Einbau in ein Gestell die folgenden Punkte beachten: Modell BVT-500P nicht über Netzgeräten oder anderen wärmeentwickelnden Geräten einbauen. Werden andere Bausteine unter Modell BVT-500P in ein Gestell eingebaut, einen Mindestabstand von 30 cm einhalten.

1-3-3. Prüfungen vor der Inbetriebnahme

1) Prüfen, ob der auf der Anschlußplatte angebrachte Spannungswähler [VOLTAGE SELECTOR] auf die örtliche Netzspannung eingestellt ist.
2) Sicherstellen, daß der Netzschalter [POWER] abgeschaltet ist.
3) Modell BVT-500P in ein Gestell einbauen bzw. an einem Ort aufstellen, der die obigen Aufstellungsbedingungen erfüllt.
4) Die Ein- und Ausgänge kontrollieren.
5) Die Frontplatte öffnen und prüfen, ob alle Leiterplatten richtig eingesetzt sind. Prüfen, ob die Nummer an der Unterseite des Rahmens mit der Nummer auf der Unterseite der Leiterplatte übereinstimmt.
6) Den Netzschalter [POWER] einschalten und die Regler, Regelwiderstände und Schalter gemäß den Angaben dieser Anleitung aufgeführten Informationen einstellen.

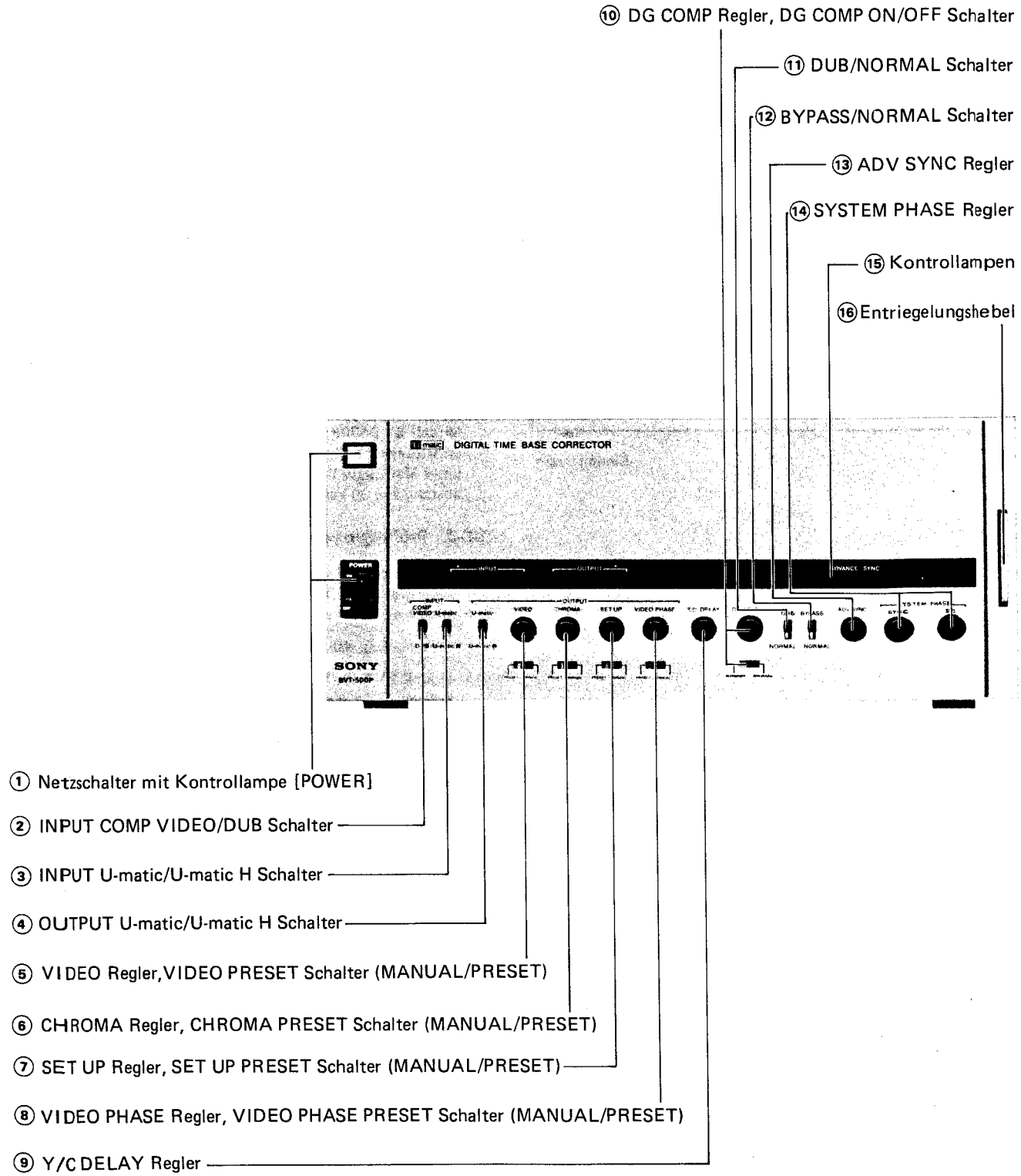
1-3-4. Vorsichtsmaßnahmen beim Betrieb

- Wenn die Leiterplatten eingesetzt bzw. herausgenommen werden, die Nummern an der Unterseite des Rahmens und an der Unterseite der Leiterplatte überprüfen und auf richtige Position achten.

1-4. BEDIENUNGSELEMENTE

1-4-1. Steuertafel

Häufig verwendete Schalter und Regler sind alle auf der Frontplatte angebracht.



① **Netzschalter und Kontrollampe [POWER]**
Wird der POWER Schalter eingeschaltet, dann leuchtet die POWER Kontrollampe auf, und das Gerät wird mit Strom versorgt.

② **INPUT COMP VIDEO/DUB Schalter**
Mit diesem Schalter wird das Eingangssignal gewählt. Diesen Schalter verwenden, um zwischen dem BAS-Signal, das über den BNC (IN) Stecker eingespeist wird, bzw. dem DUB-Eingangssignal, das über den DUB-Stecker eingespeist wird, zu wählen.

③ **INPUT U-matic/U-matic H Schalter**
Dieser Schalter arbeitet, wenn der INPUT COMP VIDEO/DUB Schalter ② auf DUB gestellt ist. Entsprechend dem Eingangssignalformat (z.B. Bandwiedergabe) einstellen.

④ **OUTPUT U-matic/U-matic H Schalter**
Dieser Schalter wird verwendet, um zu bestimmen, ob das Ausgangsformat des DUB Anschlusses für einen U-matic oder einen U-matic H Video-Recorder einzustellen. Die Schalterstellung hat keinen Einfluß auf den BAS-Signalausgang.

⑤ **VIDEO Regler**
VIDEO PRESET Schalter (MANUAL/PRESET)
MANUAL: Diese Stellung ermöglicht eine Einstellung des Video-Pegels aller Ausgangssignale in einem Bereich von ±3 dB.
PRESET: Der Videopegel der Ausgangsignale ist unabhängig von der Stellung des VIDEO Reglers auf den Bezugspegel eingestellt.

⑥ **CHROMA Regler**
CHROMA PRESET Schalter (MANUAL/PRESET)
MANUAL: Bei dieser Schalterstellung kann der Chroma-Pegel im Bereich von ±3 dB eingestellt werden.
PRESET: Der Chroma-Ausgangspegel von Modell BVT-500P ist unabhängig von der Position des CHROMA Reglers auf den Bezugspegel eingestellt.

⑦ **SET UP Regler**
SET UP PRESET Schalter (MANUAL/PRESET)
MANUAL: Bei dieser Schalterstellung kann der Set-up-Pegel in einem Bereich von ±0,035V eingestellt werden.
PRESET: Der Set-up-Pegel von Modell BVT-500P ist unabhängig von der Stellung des SET UP Reglers auf 0 eingestellt.

⑧ **VIDEO PHASE Regler**
VIDEO PHASE PRESET Schalter (MANUAL/PRESET)
MANUAL: Bei dieser Schalterstellung kann die relative Phase in Bezug auf die Video- und Synchron-Signale (Video-Ausgangsphase) stufenlos in einem Bereich von ±1 µsek. eingestellt werden.
PRESET: Die relative Phase (Video-Ausgangsphase) ist unabhängig von der Position des VIDEO PHASE Reglers auf den Bezugspegel eingestellt.

⑨ **Y/C DELAY Regler**
Mit Hilfe dieses Reglers kann die relative Phase des Luminanz- und Chrominanz-Ausgangssignal stufenlos im Bereich von ±150 nsek. eingestellt werden.
Für eine Einstellung von mehr als ±150 nsek. verwenden Sie den Daumenradschalter auf der MY-Leiterplatte im Inneren von Modell BVT-500P.

⑩ **DG COMP Regler**
DG COMP ON/OFF Schalter
ON: Der Differentialgewinn des Ausgangs von Modell BVT-500P kann in einem Bereich von ±20% linear kompensiert werden.
OFF: Die Differentialgewinn-Kompensationsfunktion ist abgeschaltet.

⑪ **DUB/NORMAL Schalter**
Dieser Schalter wird zur Wahl der Betriebsart verwendet (Kopieren oder Signalaufbereitung). Bei Stellung dieses Schalters auf DUB (Kopieren) sind alle Ausgangsregler automatisch auf PRESET gestellt.

⑫ **BYPASS/NORMAL Schalter**
NORMAL: Normale zeitkorrigierte Ausgangssignale erscheinen an den Ausgängen von Modell BVT-500P.
BYPASS: Das OFF TAPE VIDEO Eingangssignal wird an den VIDEO-1 Ausgangsstecker umgeleitet.

⑬ **ADV SYNC Regler**
Mit diesem Regler kann die vorgezogene Synchron-Phase in einem Bereich von ±5 Zeilen eingestellt werden. Den Regler so einstellen, daß die ADVANCE SYNC Kontrollampe grün aufleuchtet.

⑭ **SYSTEM PHASE Regler**
Diese Regler werden verwendet, um die SYNC-Phase und die SC-Phase des TBC-Ausgangs entsprechend dem Bezugseingang von Modell BVT-500P in einem Bereich von 3 µsek. Phasenvoreilung bis 1 µsek. Phasenverzögerung einzustellen.
Die SYNC-Phase und die SC-Phase des BVT-500P Ausgangs können unabhängig voneinander eingestellt werden.

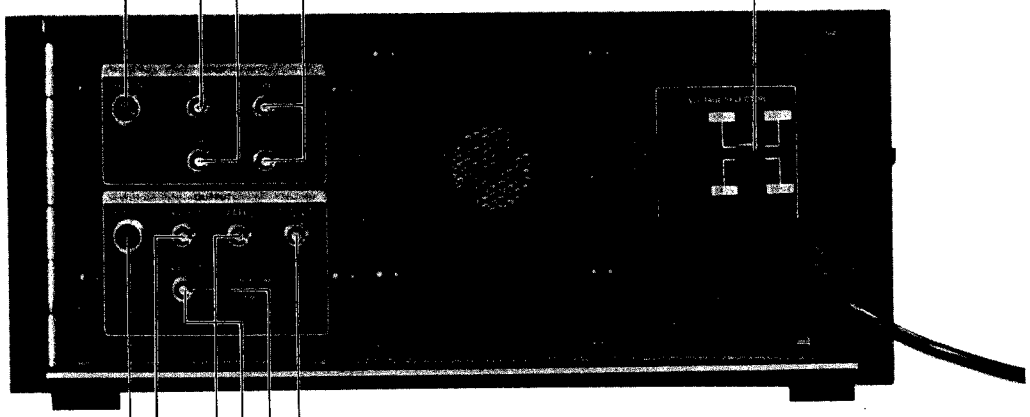
⑮ **Kontrollampen**
Diese Kontrollampen zeigen die Betriebsfunktion von Modell BVT-500P an.

⑯ **Entriegelungshebel**
Die Unterseite dieses Hebels drücken, den Hebel umklappen und nach vorne herausziehen. Danach kann die Fronttafel nach links aufgeklappt werden.

Prozessor-Einstellen

Eingang (INPUT)	Ausgang (OUTPUT)	Prozessor-Einstellen			
COMP VIDEO/DUB Schalter	DUB/ NORMAL Schalter	Video-Pegel	Chroma-Pegel	Set-up-Pegel	NOISE CANCELLOR
COMP VIDEO	NORMAL	ermöglichen	ermöglichen	ermöglichen	OFF
COMP VIDEO	DUB	ermöglichen	ermöglichen	ermöglichen	OFF
DUB	NORMAL	ermöglichen	ermöglichen	ermöglichen	ON
DUB	DUB	ermöglichen	ermöglichen	ermöglichen	OFF

1-4-2. Anschlußplatte



① DUB IN
② OFF TAPE VIDEO (Zur Korrektur)
③ RF (vom Magnetband)
④ BAS-Signal (Bezugssignal) IN-OUT
⑤ Spannungswähler
⑥ DUB OUT
⑦ VIDEO-1 (korrigiertes Video-Signal)
⑧ VIDEO-2 (korrigiertes Video-Signal)
⑨ VIDEO-3 (korrigiertes Video-Signal)
⑩ NON COMP/COMP Schalter
⑪ ADV SYNC OUT (Ausgang für U-matic Video-Recorder)

Hinweise zum Anschließen

- Den Video-Recorder und das Zeitbasis-Ausgleichsgerät mit Hilfe der mit dem Video-Recorder mitgelieferten DUB-Kabel verbinden; für den Anschluß aller anderen Ein- und Ausgangssignale BNC-Stecker verwenden.
- Der VIDEO-3 Ausgang kann für BAS-Signale bzw. Nicht-BAS-Signale eingestellt werden, indem der NON COMP/COMP Schalter ⑩ entsprechend eingestellt wird.
- Um Modell BVT-500P mit einem externen Video-Bezugssignal zu taktsynchronisieren, das BAS-Signal für Bezugszwecke anschließen.

Daten der Eingangs-/Ausgangsanschlüsse

ANSCHLUSS	BESCHREIBUNG
Eingang [INPUT]	
① DUB IN	Spezieller Mehrpolstecker
② OFF TAPE VIDEO (zur Korrektur)	BNC, 1 $V_{s\text{-}s}$, 75 Ohm
③ RF (vom Magnetband)	BNC, 0,5 $V_{s\text{-}s}$, 75 Ohm
④ BAS-Signal (Bezugssignal) IN-OUT	BNC, 1 $V_{s\text{-}s}$, 75 Ohm
Ausgang [OUTPUT]	
⑥ DUB OUT	Spezieller Mehrpolstecker
⑦ VIDEO-1 (korrigiertes Video-Signal)	BNC, 1 $V_{s\text{-}s}$, 75 Ohm
⑧ VIDEO-2 (korrigiertes Video-Signal)	BNC, 1 $V_{s\text{-}s}$, 75 Ohm
⑨ VIDEO-3 (korrigiertes Video-Signal)	BNC, Nicht-BAS-Signal/ BAS-Signal, 1 $V_{s\text{-}s}$
⑪ ADV SYNC OUT (zu U-matic Video-Recorder)	BNC, 2 $V_{s\text{-}s}$, 75 Ohm

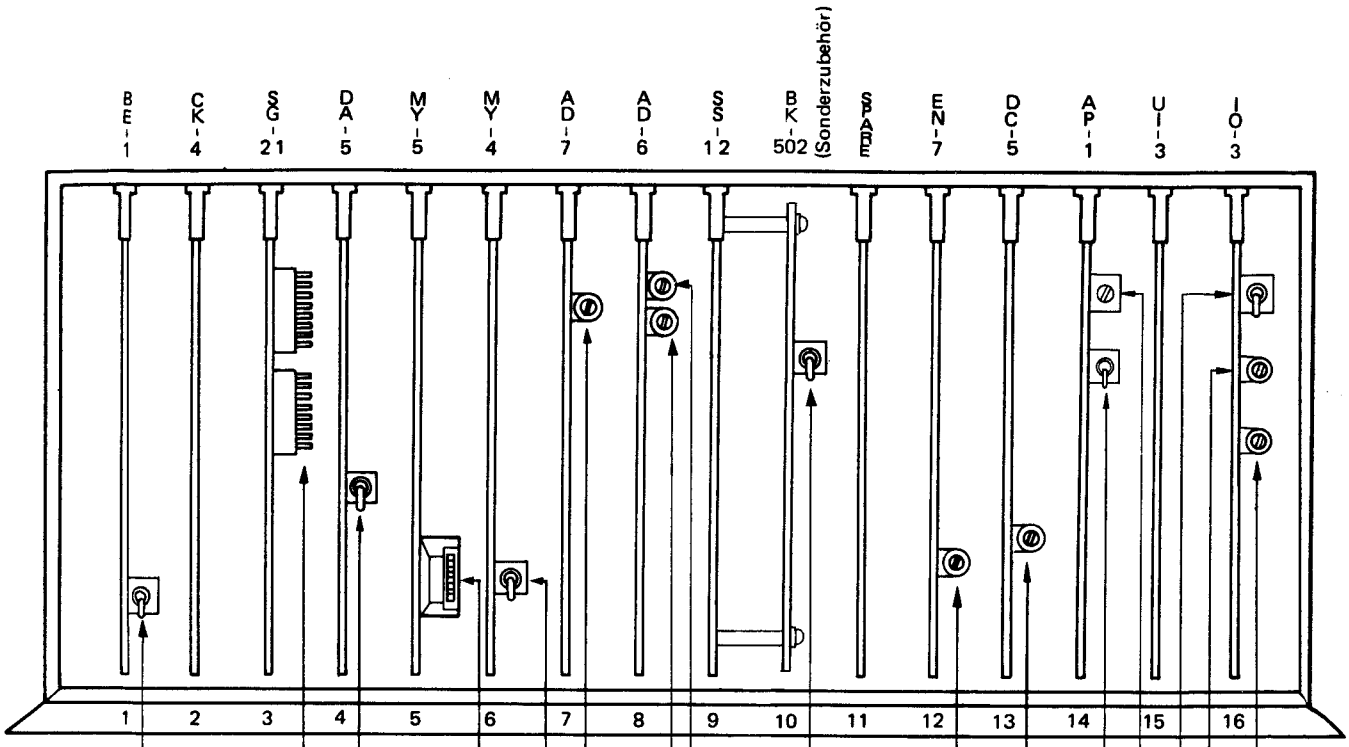
Spannungswähler

Um die Eingangsspannung einzustellen (100/120/220/240 V ±10%, 48 bis 64 Hz), die Sicherungsschraube des Spannungswählers [VOLTAGE SELECTOR] ⑤ mit einem Schraubenzieher lösen, den Spannungswählers auf die örtliche Netzspannung einstellen und die Schraube wieder festziehen.

Sicherung

Wenn die Stromversorgung von Modell BVT-500P ausfällt, die Abdeckung des Spannungswählers [VOLTAGE SELECTOR] ⑤ öffnen und die Sicherungen kontrollieren. Falls die Sicherungen auf OFF stehen, sie auf ON stellen; wenn die Sicherungen nach dem Einschalten des Netzschalters wieder auf OFF schalten, die Stromversorgung und die Netzspannung überprüfen. Falls keine Störungsursachen festgestellt werden können, wenden Sie sich bitte an den Sony-Kundendienst.

1-4-3. Gedruckte Leiterplatten



⑭ BEAT CANCELLER Schalter

① V BLANKING DIP Schalter

② NOISE CANCELLER Schalter

③ Y/C DELAY Schalter (zur Grobeinstellung)

④ CHROMA LINE ADD Schalter

⑤ CHROMA A/D Umwandlungsbereich-Regelwiderstand (VR-2)

⑥ LUMINANCE A/D Umwandlungsbereich-Regelwiderstand (VR-4)

⑥ LUMINANCE A/D Umwandlungsbereich-Regelwiderstand (VR-5)

⑦ BURST POSITION Regelwiderstand (VR-8)

⑧ DECODE PHASE Regelwiderstand (VR-4)

⑨ INERTIA SELECT Schalter

⑩ INPUT LEVEL PRESET/MANUAL Schalter

⑪ INPUT LEVEL Regler

⑫ REC CURRENT Regelwiderstand

⑬ COLOUR LOCK Regler (VR-7)

⑮ LOCK MODE SELECT Wähler

① **V BLANKING DIP Schalter (SG-21 Leiterplatte Nr. 3)**
Dieser DIP-Schalter wird verwendet, um unerwünschte Signalanteile der H-Zeilen bei der vertikalen Bildaustastung zu unterdrücken.

② **NOISE CANCELLER Schalter (DA-5 Leiterplatte Nr. 4)**
Wenn der DUB/NORMAL Schalter auf der Frontplatte auf NORMAL und der INPUT COMP VIDEO/DUB Schalter auf DUB steht, dann ist die Rauschunterdrückung automatisch eingeschaltet. Wenn jedoch dieser Schalter auf Position OFF gestellt wird, ist die Rauschunterdrückung ungeachtet von der Betriebsart ausgeschaltet.

③ **Y/C DELAY Schalter (zur Grobeinstellung) (MY-5 Leiterplatte Nr. 5)**
Dieser Daumenradschalter ermöglicht ein Einstellen der relativen Luminanz- und Chrominanzphase in Schritten von 250 nsek.
(Den Y/C DELAY Regler auf der Frontplatte zur Feineinstellung verwenden.)

④ **CHROMA LINE ADD Schalter (MY-6 Leiterplatte Nr. 6)**
Der Störspannungsabstand der Chroma-Signale kann durch Hinzufügen der Chroma-Zeilen um 3 dB verbessert werden.

⑤ **CHROMA A/D Umwandlungsbereich-Regelwiderstand (AD-7 Leiterplatte Nr. 7)**
VR-2 auf der Leiterplatte AD-7 bestimmt den Chroma-Analog/Digital-Umwandlungsbereich. Dieses Einstellteil sollte jedoch nicht berührt werden, außer Modell BVT-500P arbeitet nicht oder ist gestört.

⑥ **LUMINANCE A/D Umwandlungsbereich-Regelwiderstand (AD-6 Leiterplatte Nr. 8)**
VR-4 und VR-5 bestimmen den Luminanz-Analog/Digital-Umwandlungsbereich. Diese Einstellteile sollten jedoch nicht berührt werden, außer Modell BVT-500P arbeitet nicht oder ist gestört.

⑦ **BURST POSITION Regelwiderstand (EN-7 Leiterplatte Nr. 12)**
Dieser Regelwiderstand (VR-8) ermöglicht ein Einstellen der Burst-Signalphase (Farbsynchronsignal) des Video-Ausgangssignals.

⑧ **DECODE PHASE Regelwiderstand (DC-5 Leiterplatte Nr. 13)**
Wird ein Farb-Video-Recorder mit Niederfrequenzumsetzung verwendet, dann kann es manchmal zu Verschiebungen der Burstphase kommen. In solchen Fallen ergibt sich ein schlechter Störspannungsabstand am Monitor. Diesen Regelwiderstand (VR-4) ggf. so einstellen, daß die relativen Phasen des Ausgangs-Burstsignals und des Chroma-Signals richtig eingestellt sind.

⑨ **INERTIA SELECT Schalter (AP-1 Leiterplatte Nr. 14)**
Normalerweise diesen Schalter auf 32-LINE stellen.
Beim Auftreten von Farbflimmern, aufgrund häufiger Dropouts, diesen Schalter auf 64-LINE stellen.

⑩ **INPUT LEVEL PRESET/MANUAL Schalter (IO-3 Leiterplatte Nr. 16)**
Normalerweise diesen Schalter auf PRESET stellen.
Wenn es sich bei dem Eingangssignal um ein Signal mit verzerrtem Synchronsignal handelt, wie z. B. ein zusammengemischtes Bandwiedergabesignal, diesen Schalter auf MANUAL stellen. Anschließend den Regler ⑪ INPUT LEVEL unter Beobachtung des TBC VIDEO OUTPUT Signals einjustieren.

⑪ **INPUT LEVEL Regler (IO-3 Leiterplatte Nr. 16)**

⑫ **REC CURRENT Regelwiderstand (IO-3 Leiterplatte Nr. 16)**
Dieser Regelwiderstand ermöglicht ein Einstellen des Chroma-Pegels des DUB OUT.

⑬ **COLOUR LOCK Regler (AP-1 Leiterplatte Nr. 14)**
Wenn mit dem auf DUB gestellten INPUT VIDEO/DUB Schalter die Farbe plötzlich verschwindet, oder keine richtige Farbsättigung erhalten werden kann, den COLOUR LOCK Regler einstellen.
Diesen Regelwiderstand langsam nach links oder rechts drehen, bis ein normales Bild erscheint.

⑭ **BEAT CANCELLER Schalter (BE-1 Leiterplatte Nr. 1)**
Wenn eine Interferenz entsteht, den CANCEL-Schalter der platte BE-1 auf ON (nach oben) stellen. Dadurch wird die Interferenz verringert.
Wenn der CANCEL-Schalter auf die ON-Stellung gestellt wird, und wenn der Überspielbetrieb wiederholt werden soll, kann das Bild verschlechtert werden.
Darum beim einleitenden Überspielen den CANCEL-Schalter auf OFF stellen, und nur zum letzten Überspielen den Schalter auf ON stellen.

⑮ **Synchronisationsartenwähler [LOCK MODE SELECT] (BG-3 Leiterplatte auf der 9. SS-12 Leiterplatte)**
Mit diesem auf der gedruckten Leiterplatte BG-3 (im gesondert lieferbaren Farbsynchronsignalgenerator BK-502) angebrachten Schalter kann die Synchronisationsart gewählt werden.
INT: Zur internen Synchronisation des BVT-500P mit dem Referenzsignal des Farbsynchronsignalgenerators.
EXT: Zur externen Synchronisation mit einem äußeren Referenz-Videosignal.

1-5. FARBSYNCHRONSIGNALGENERATOR BK-502

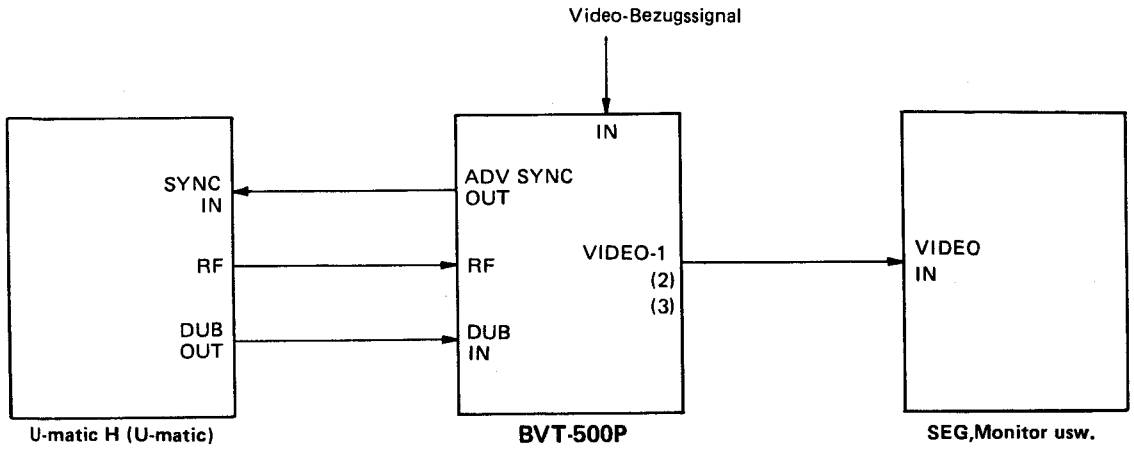
Wird der gesondert lieferbare Farbsynchronsignalgenerator BK-502 eingebaut (Leiterplatte BG-3), so kann der BVT-500P intern mit dem vom BK-502 gelieferten Referenzsignal synchronisiert werden. Das Farbsynchronsignal kann am BAS-Signalausgang (auf der Rückseite) abgenommen und als Referenzsignal für andere Videogeräte verwendet werden.

1-6. SIGNALANSCHLÜSSE

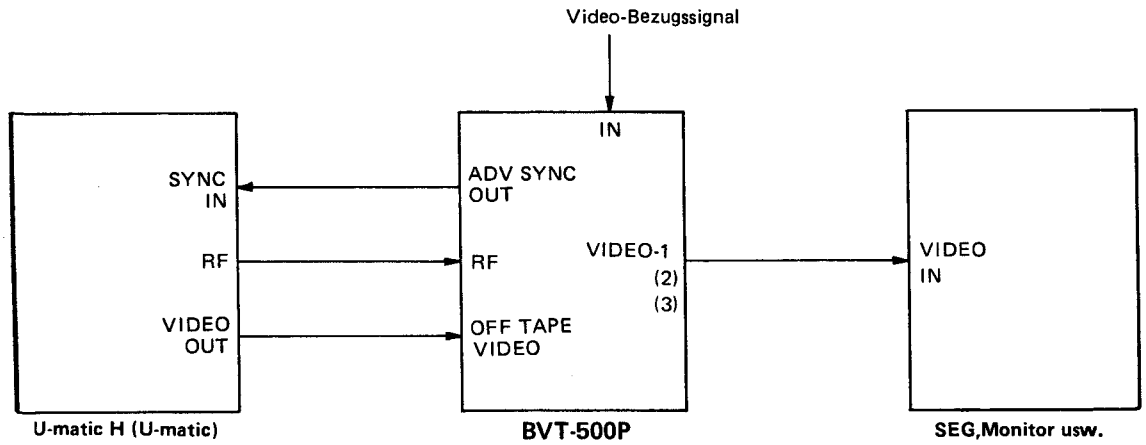
Die wichtigsten Betriebsarten sind in den nachfolgenden Diagrammen dargestellt. Die erforderlichen Anschlüsse werden jeweils deutlich gezeigt.

1) Standardanschlüsse

a) Anschließen an einen U-matic H (oder U-matic) Video-Recorder mit DUB OUT-Anschluß.

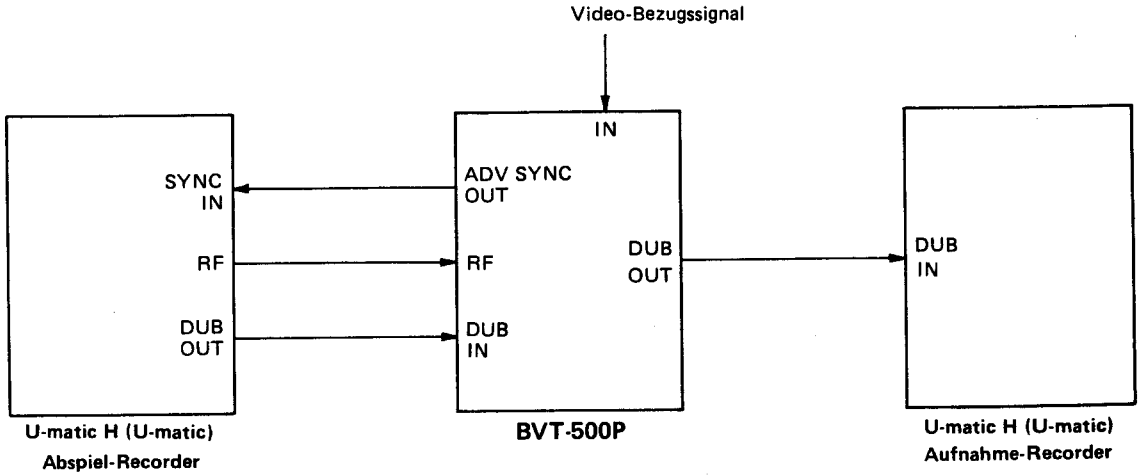


b) Anschließen an einen U-matic H (oder U-matic) Video-Recorder ohne DUB OUT-Anschluß und an andere Farb-Video-Recorder mit Niederfrequenzumsetzung.



2) Überspielen (Kopieren)

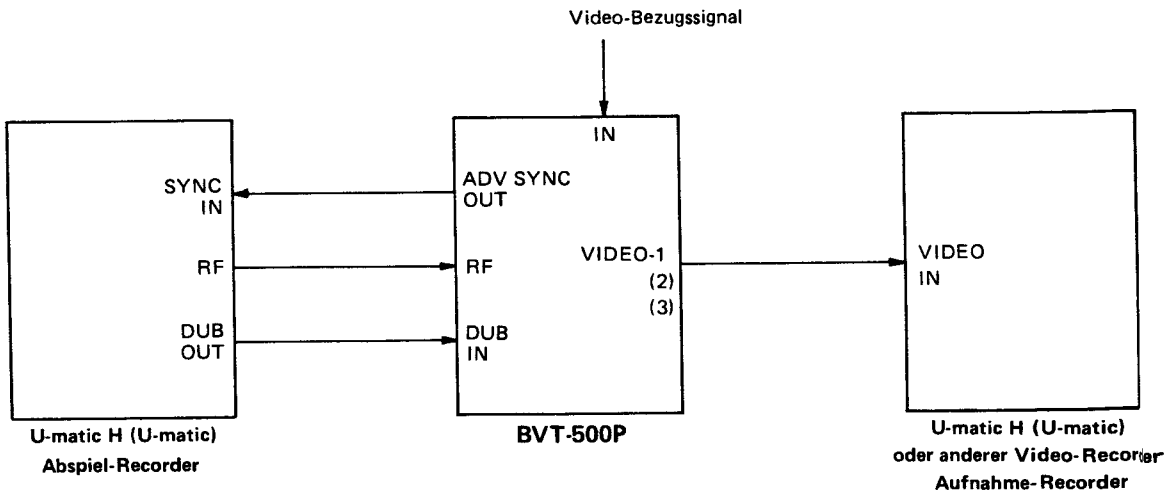
a) Wenn Abspiel- und Aufnahme-Recorder DUB-Anschlüssen haben.



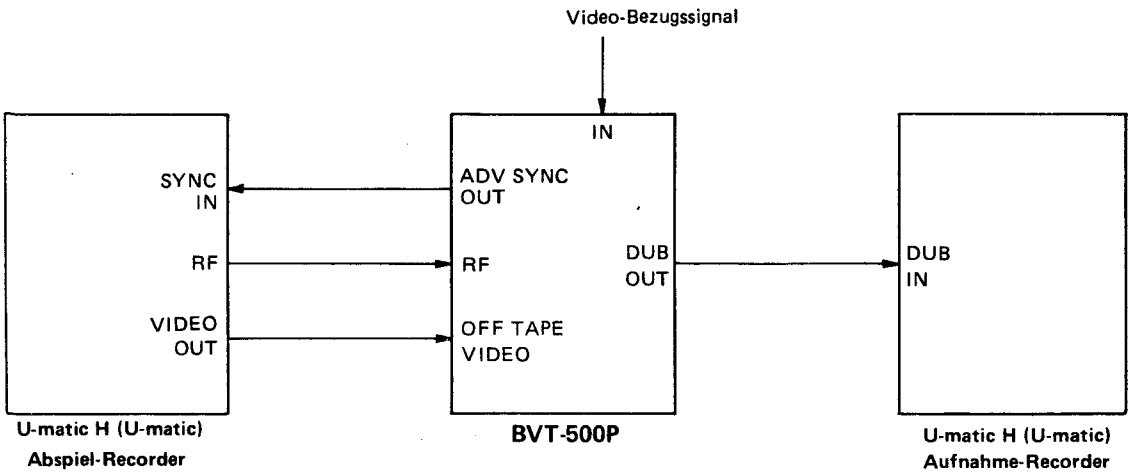
Hinweis: Durch Wahl der Ein- und Ausgangsfunktionen von Modell BVT-500P sind mit Hilfe der DUB-Stecker die folgenden Überspielarten möglich.

U-matic H ⟶ U-matic H,U-matic H ⟶ U-matic
U-matic ⟶ U-matic H,U-matic ⟶ U-matic

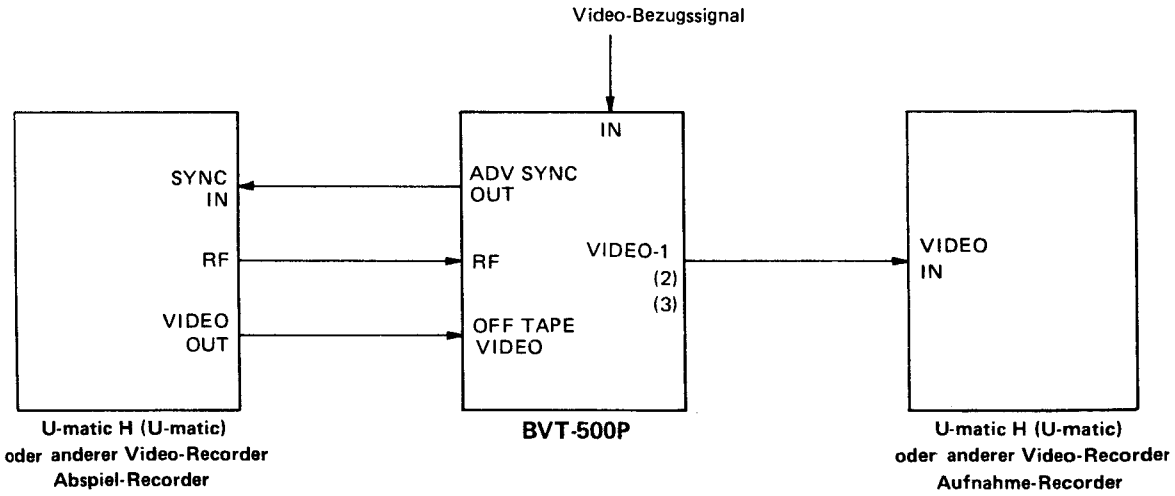
b) Wenn der Abspiel-Recorder einen DUB OUT-Anschluß, der Aufnahme-Recorder aber keinen DUB IN-Anschluß hat



c) Wenn der Abspiel-Recorder keinen DUB OUT-Anschluß, der Aufnahme-Recorder aber einen DUB IN-Anschluß hat

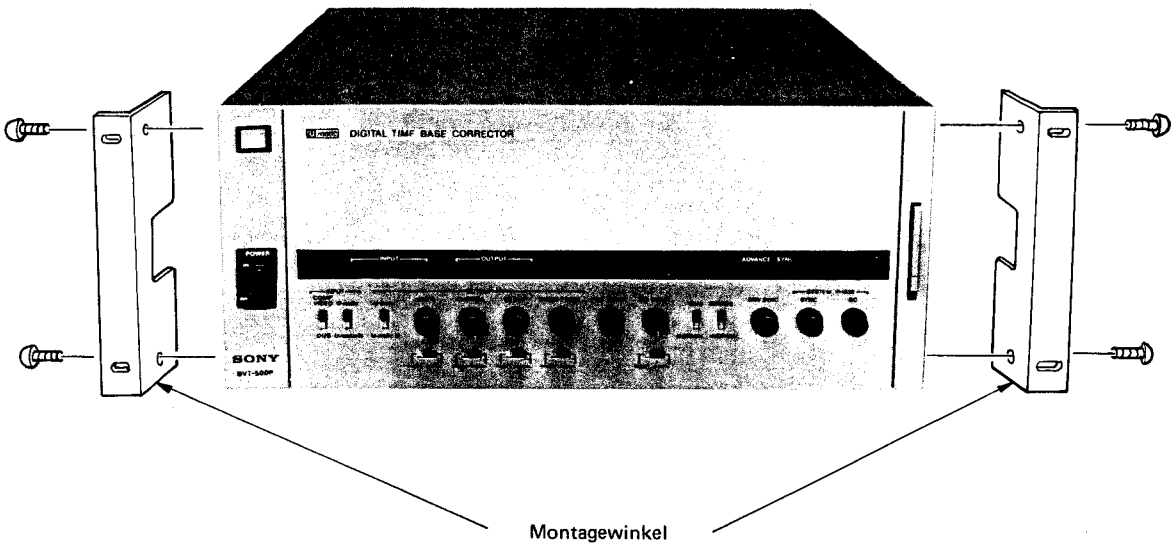


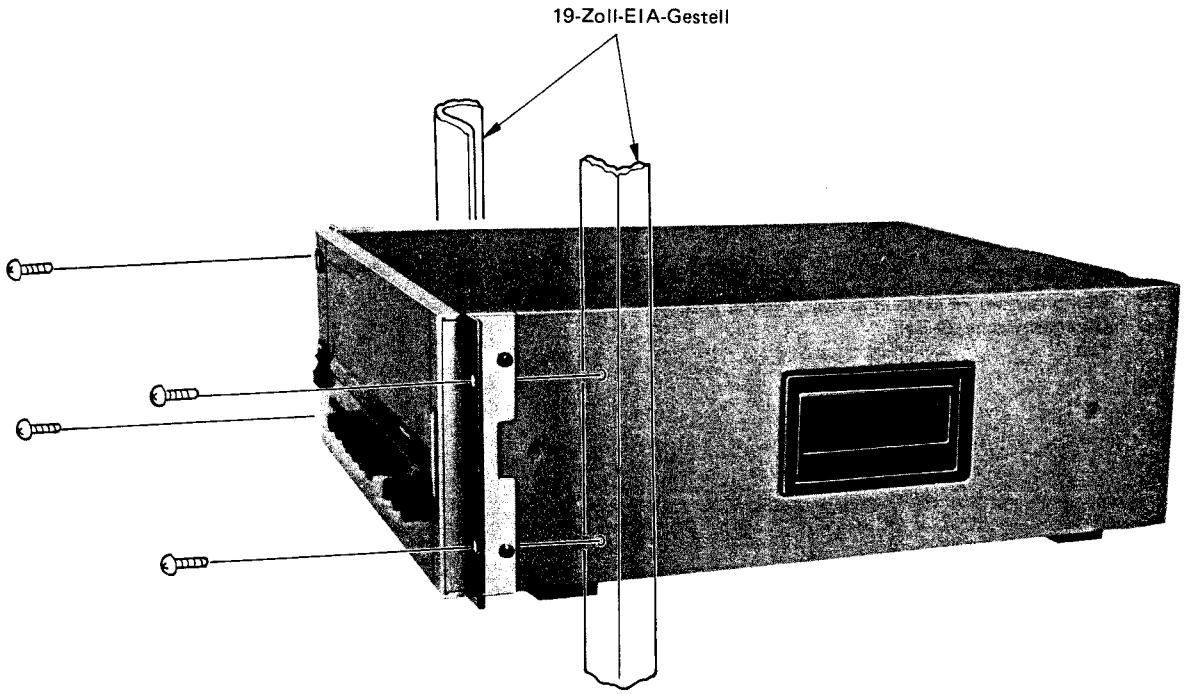
d) Wenn sowohl Abspiel- als auch Aufnahme-Recorder keine DUB-Anschlüssen haben



1-7. GESTELLEINBAU

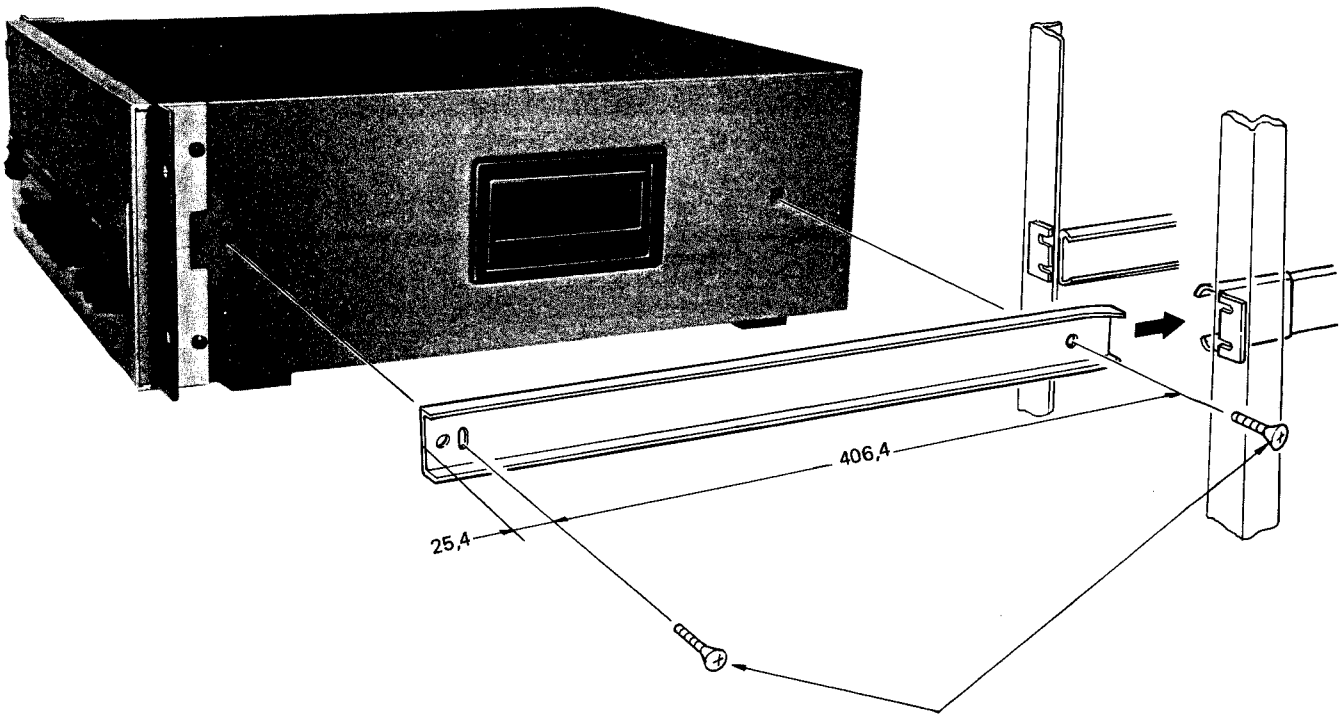
Modell BVT-500P kann in jedes 19-Zoll-Normgestell eingebaut werden, indem die Montagewinkel an den Gehäuseseiten angebracht werden.
Die Schrauben an beiden Seiten (insgesamt vier Schrauben) abnehmen. Die mitgelieferten Montagekonsolen mit diesen Schrauben wie auf dem Foto unten gezeigt befestigen.





Die Schrauben auf beiden Seiten des Gestells festziehen.

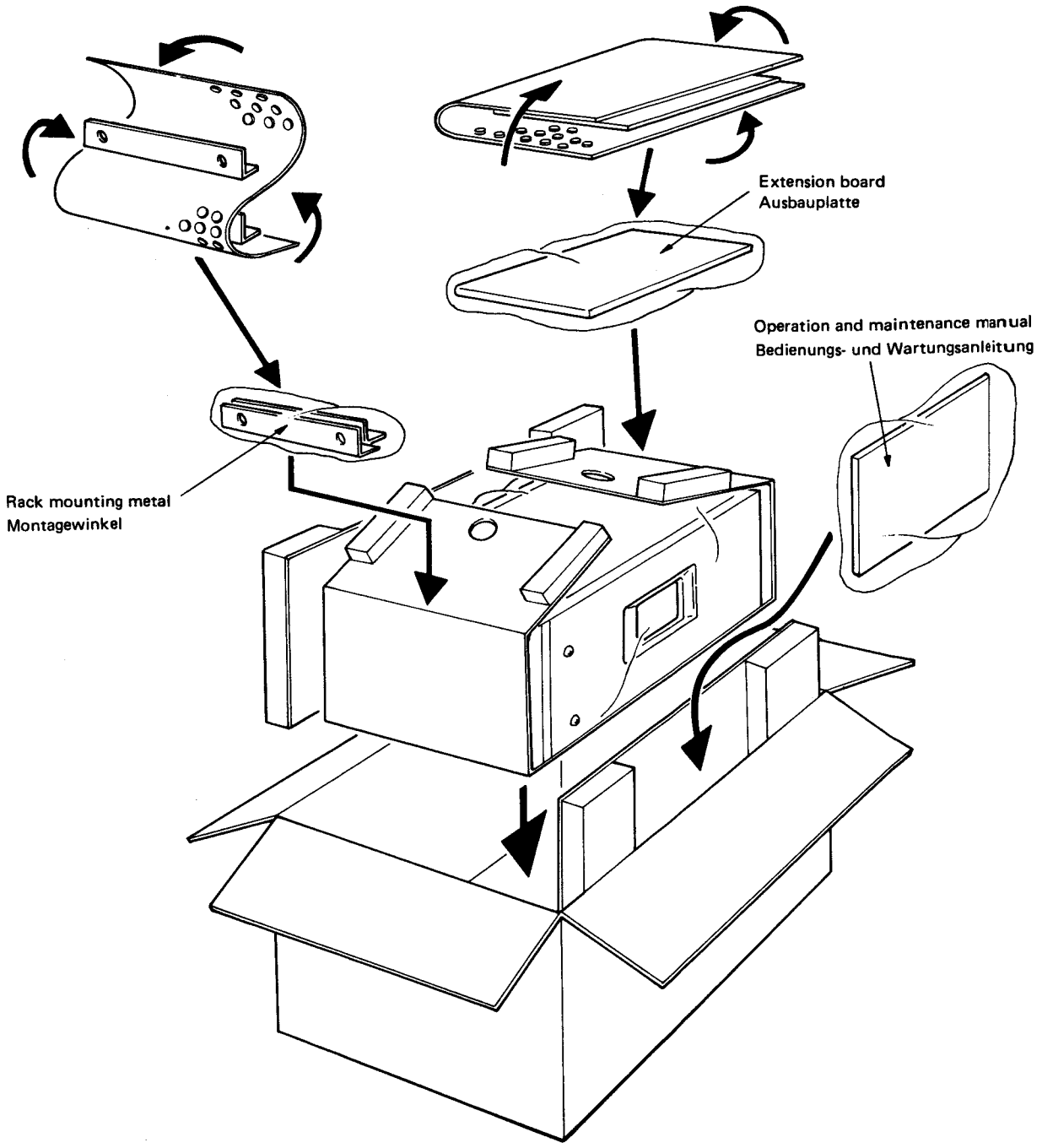
1-8. MONTAGE AUF GLEITSCHIENEN



Hersteller: ACCURIDE
Modell: Gleitschienen für Gestellmontage, Modell 203,
Gleitbahnlänge 22-Zoll

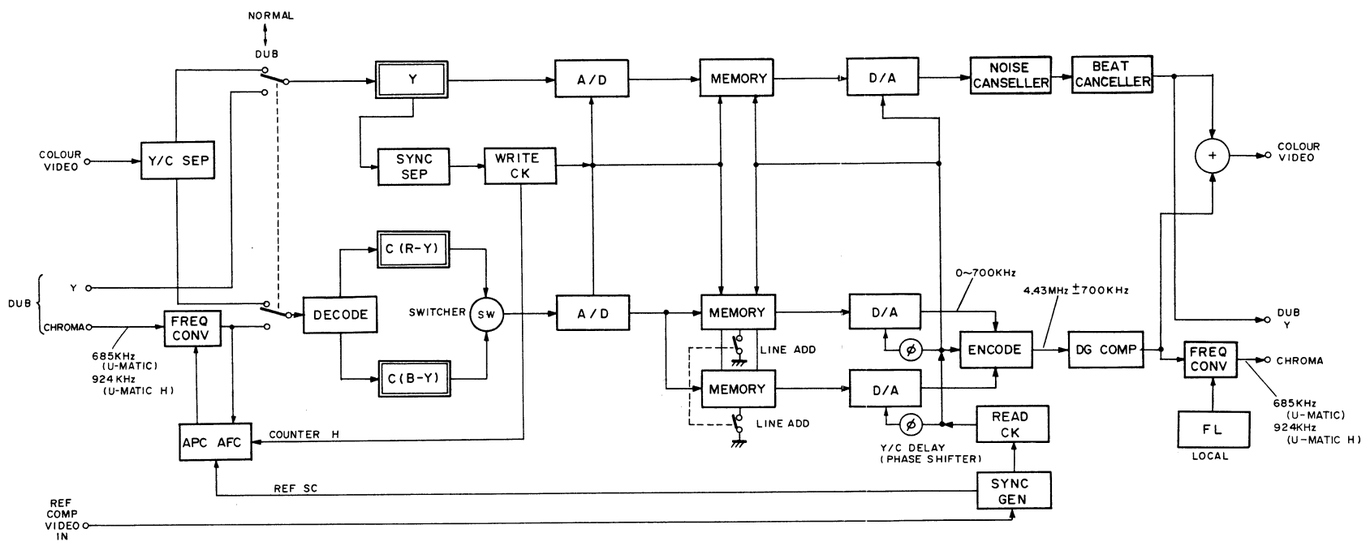
- Wenn das BVT-500P mit dem Auto transportiert wird, achten Sie darauf, das Gerät im Gestell mit Hilfe der Gleitschienen und Befestigungswinkel zu montieren.
- Auch in anderen Fällen wird die Gestellmontage des BVT-500P mit den Gleitschienen und Befestigungswinkeln zur Erleichterung von Einschub, Auszug und Wartung empfohlen.

1-9. PACKING/VERPACKUNG



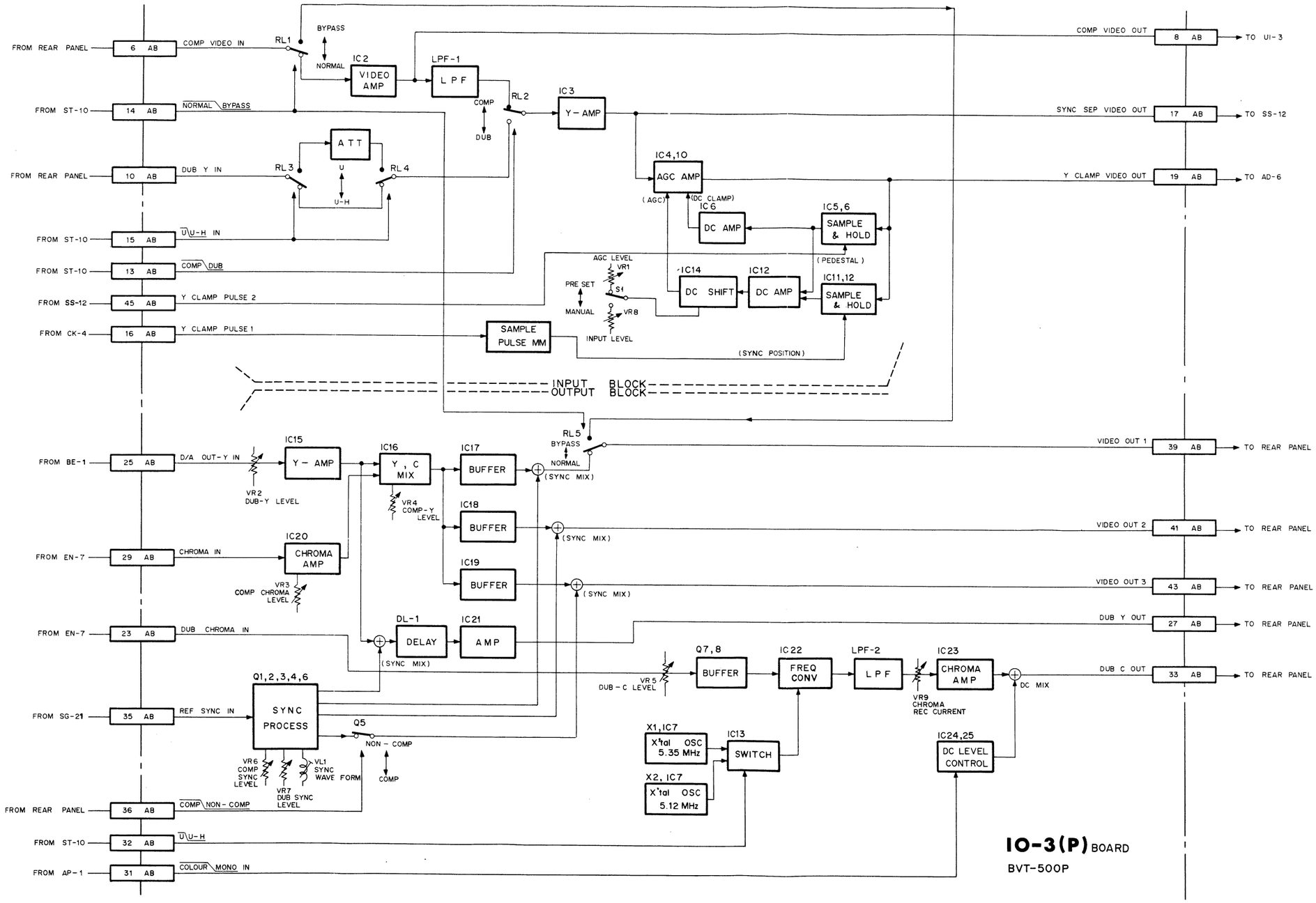
SECTION 2
BLOCK DIAGRAMS

OVERALL BLOCK DIAGRAM

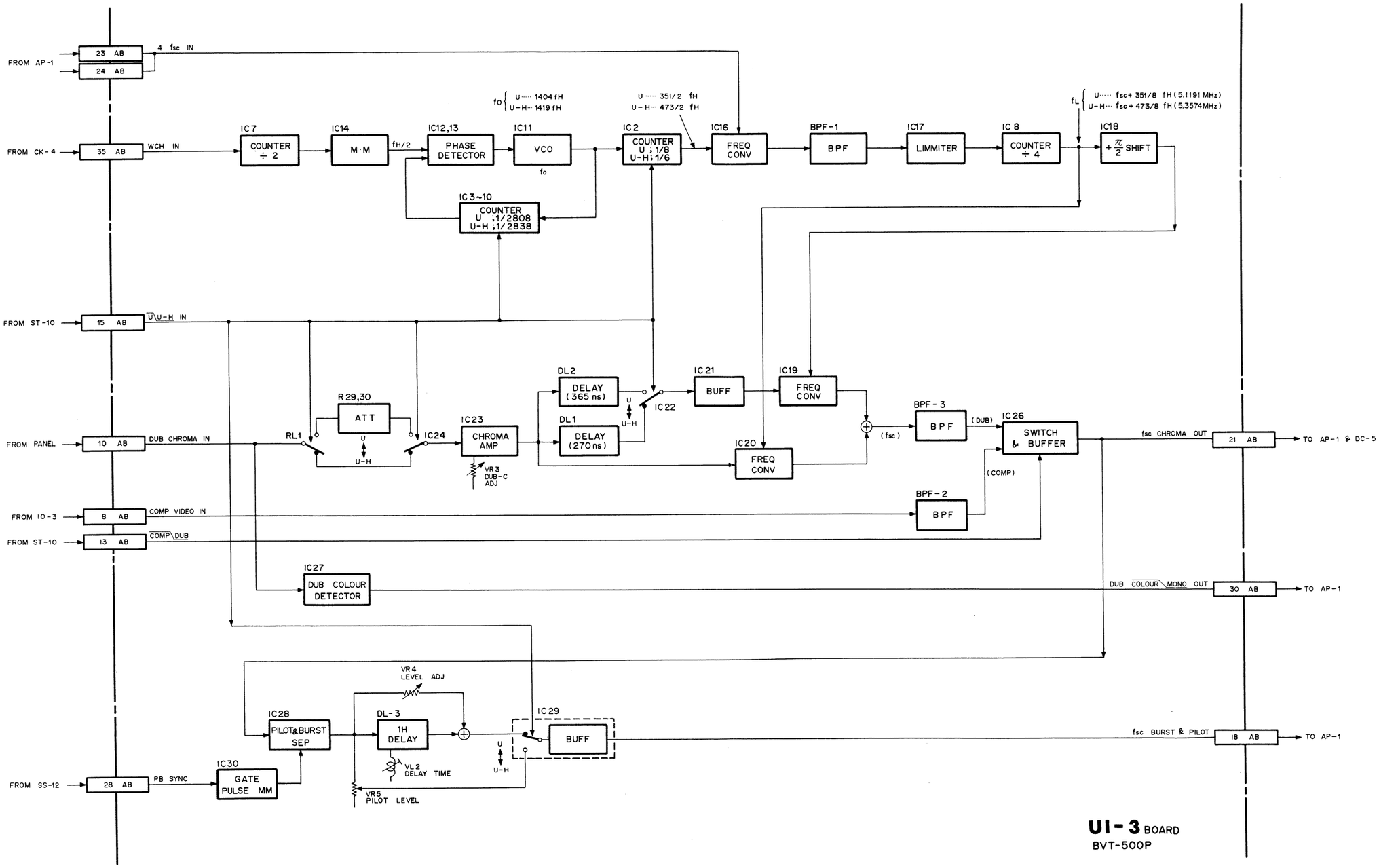


BVT-500P OVERALL

⑯ IO-3 (P) BOARD: INPUT/OUTPUT VIDEO AMPLIFIER

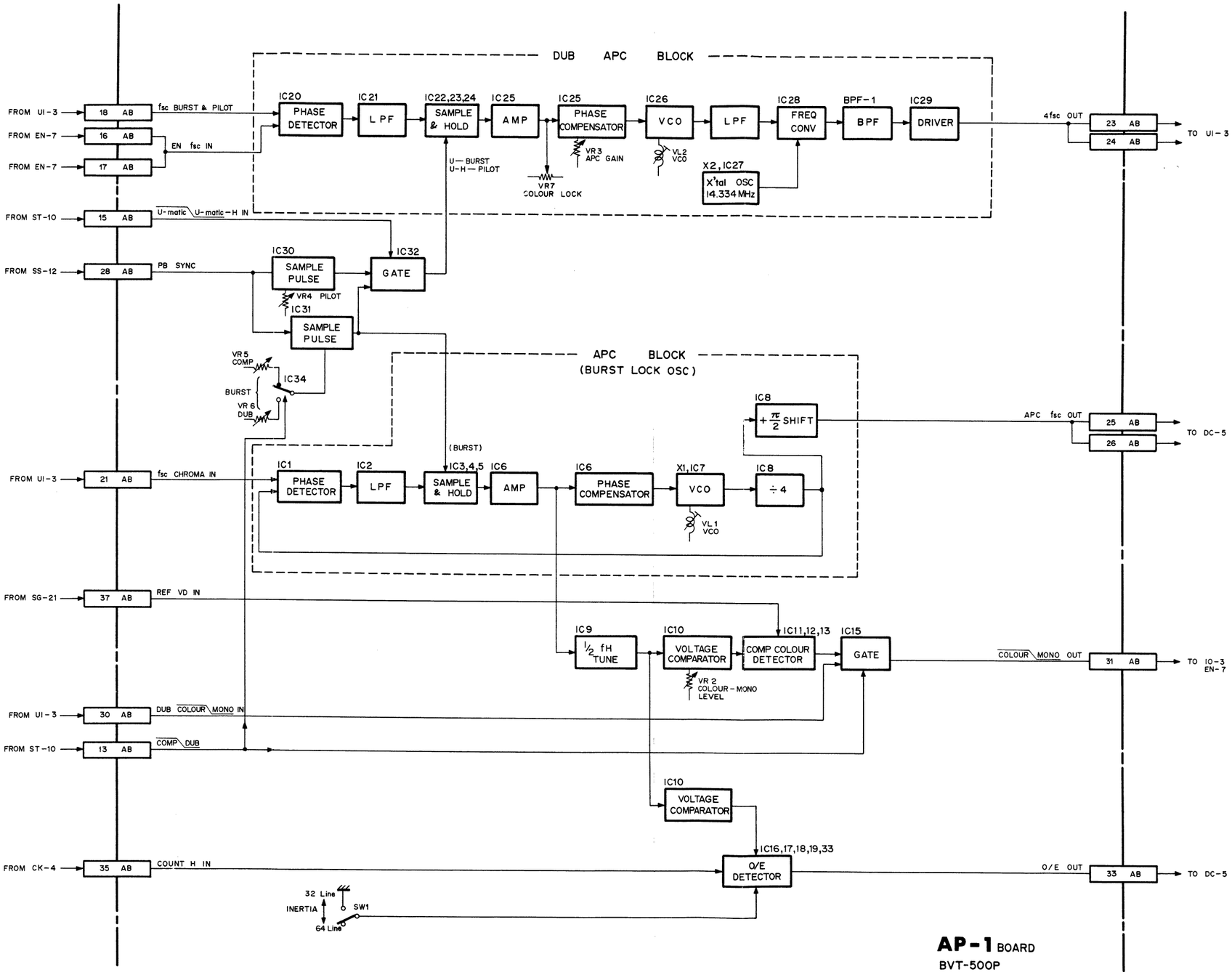


⑮ UI-3 BOARD: U-MATIC INTERFACE



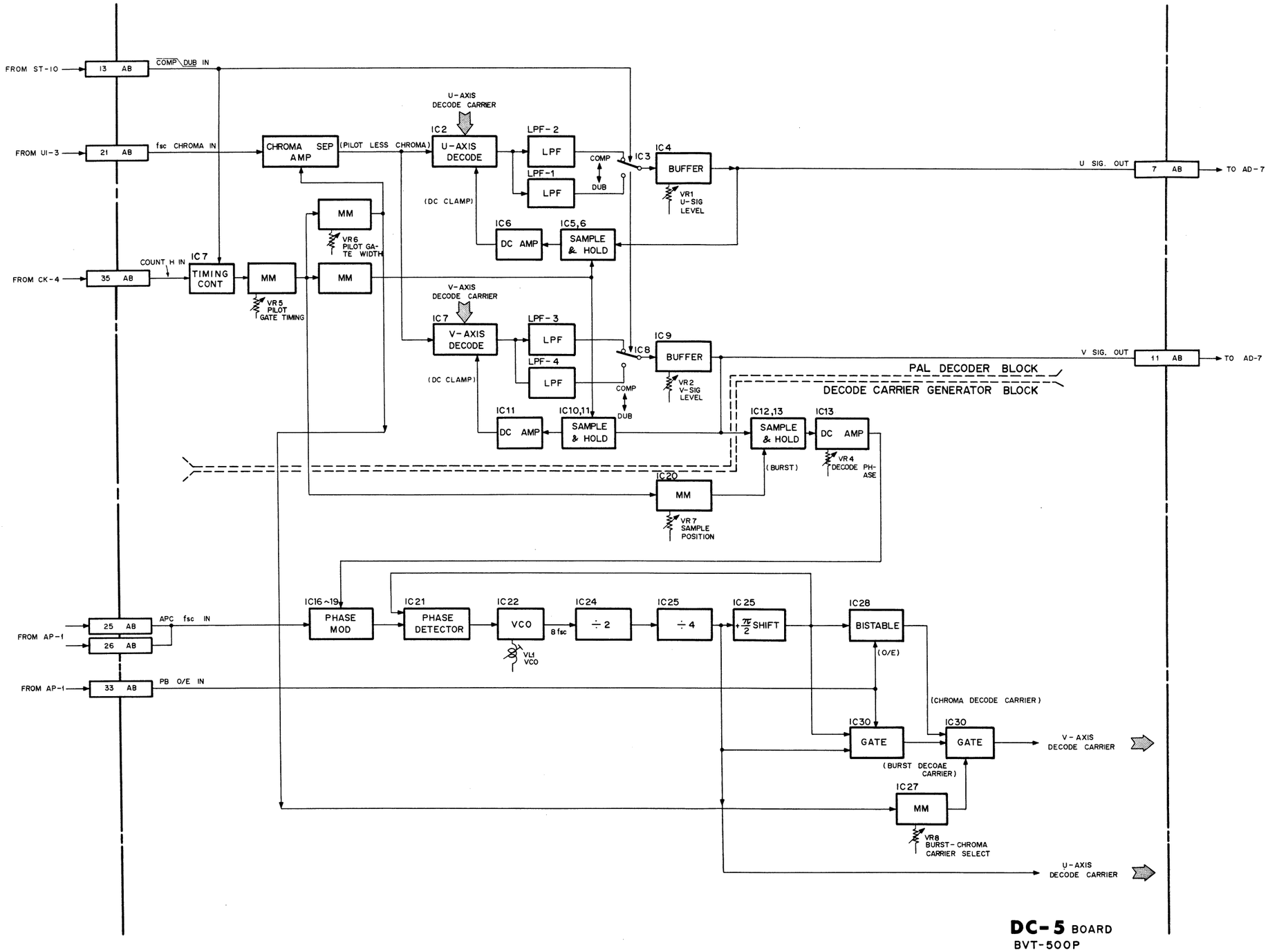
UI-3 BOARD
BVT-500P

⑭ AP-1 BOARD: APC



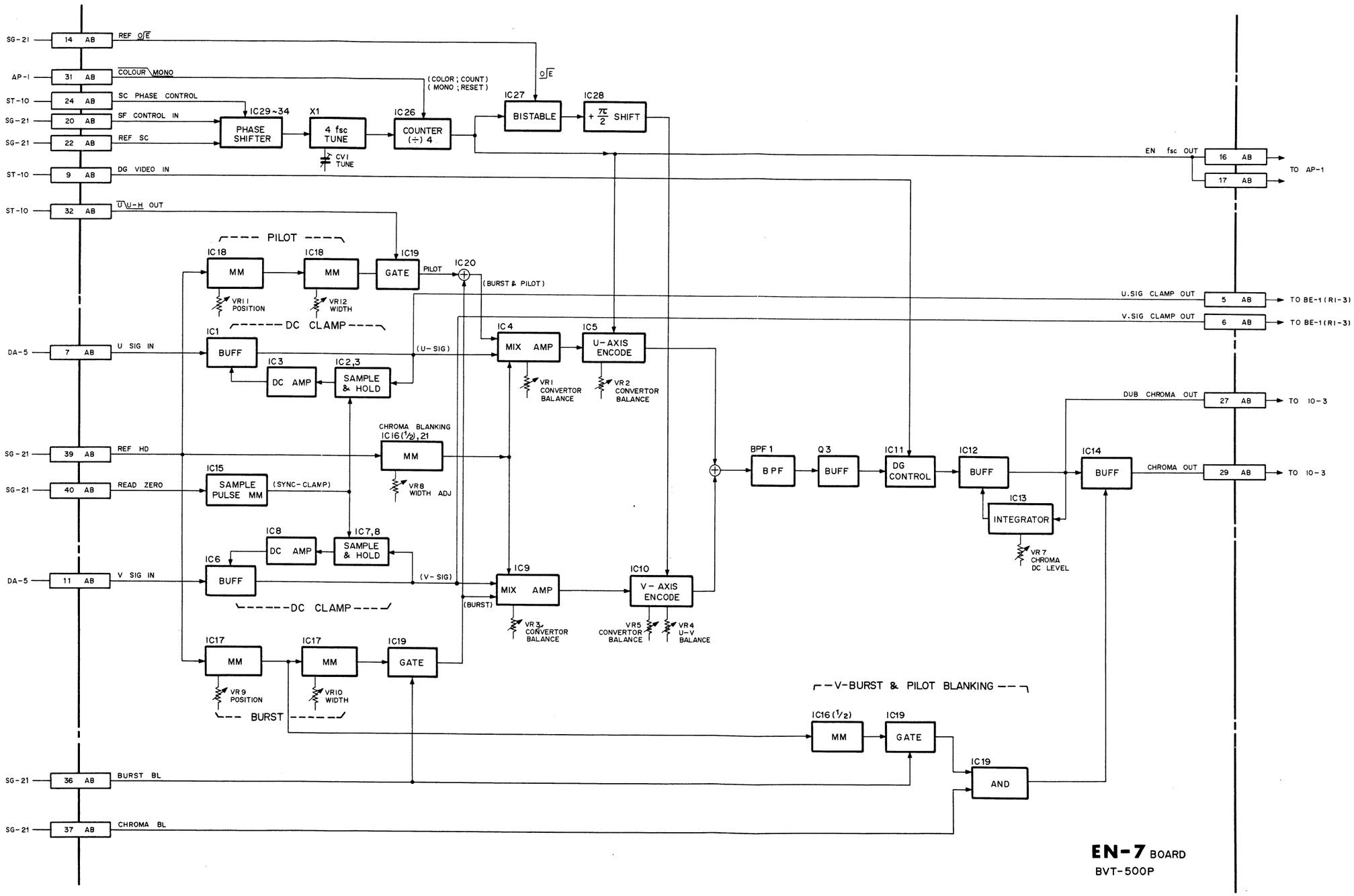
AP-1 BOARD
BVT-500P

⑬ DC-5 BOARD: CHROMA DECODER



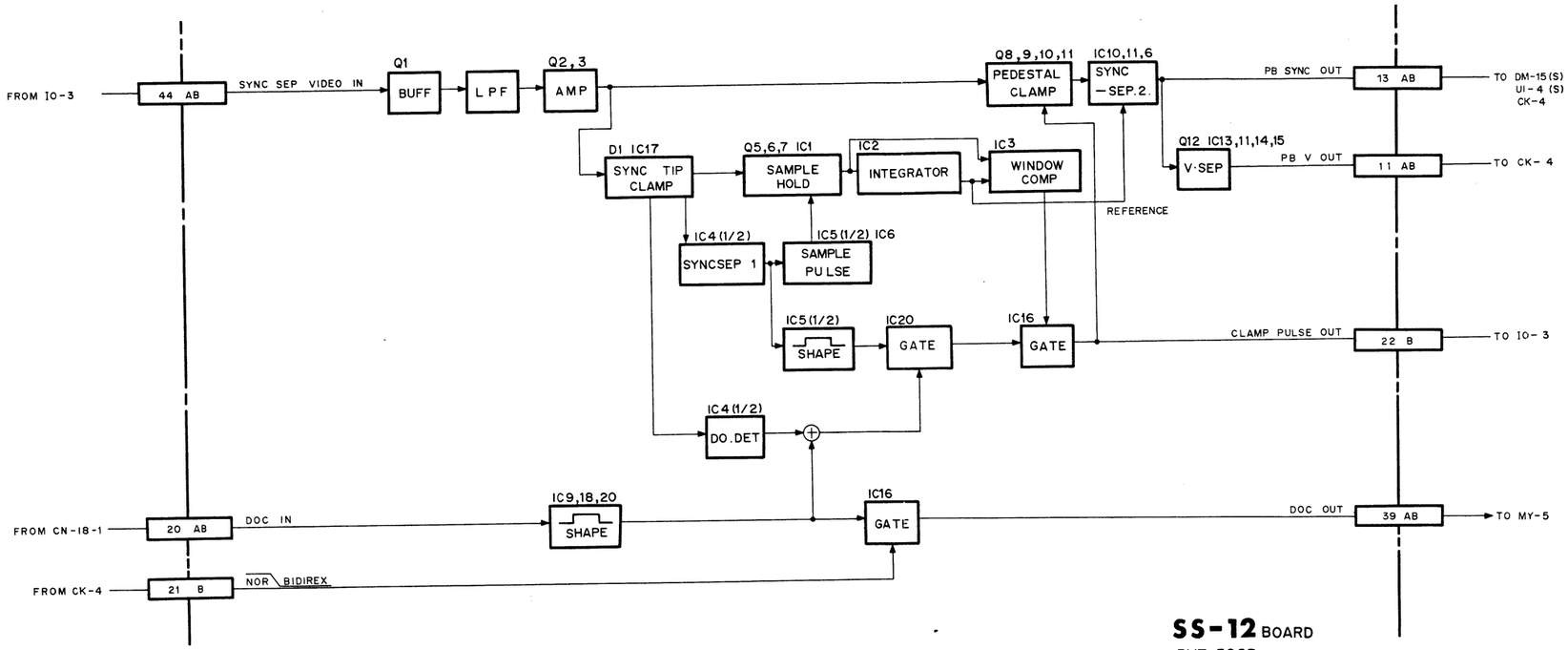
DC-5 BOARD
BVT-500P

⑫ EN-7 BOARD: CHROMA ENCODER



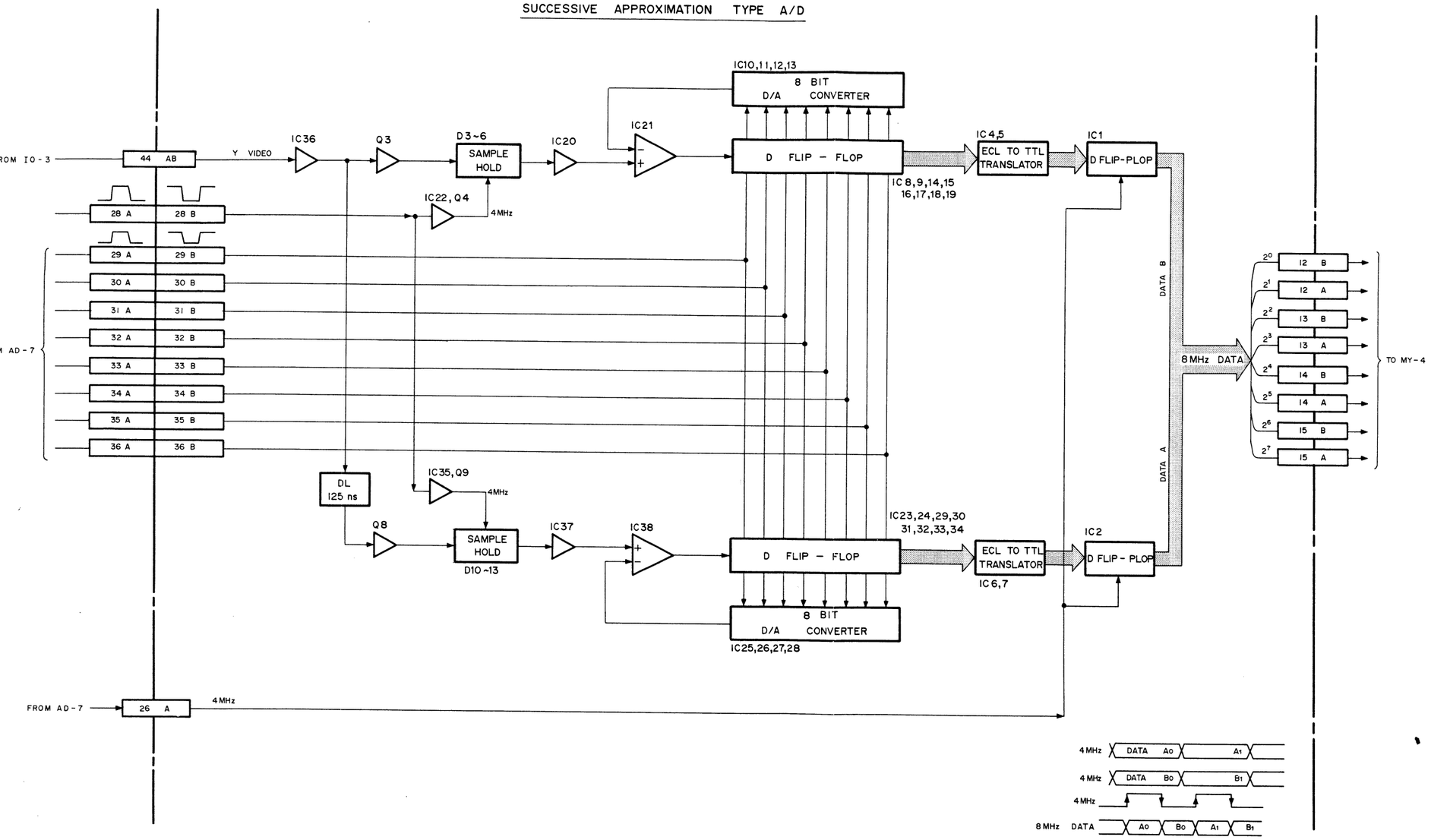
EN-7 BOARD
BVT-500P

⑨ SS-12 BOARD: SYNC SEPARATOR



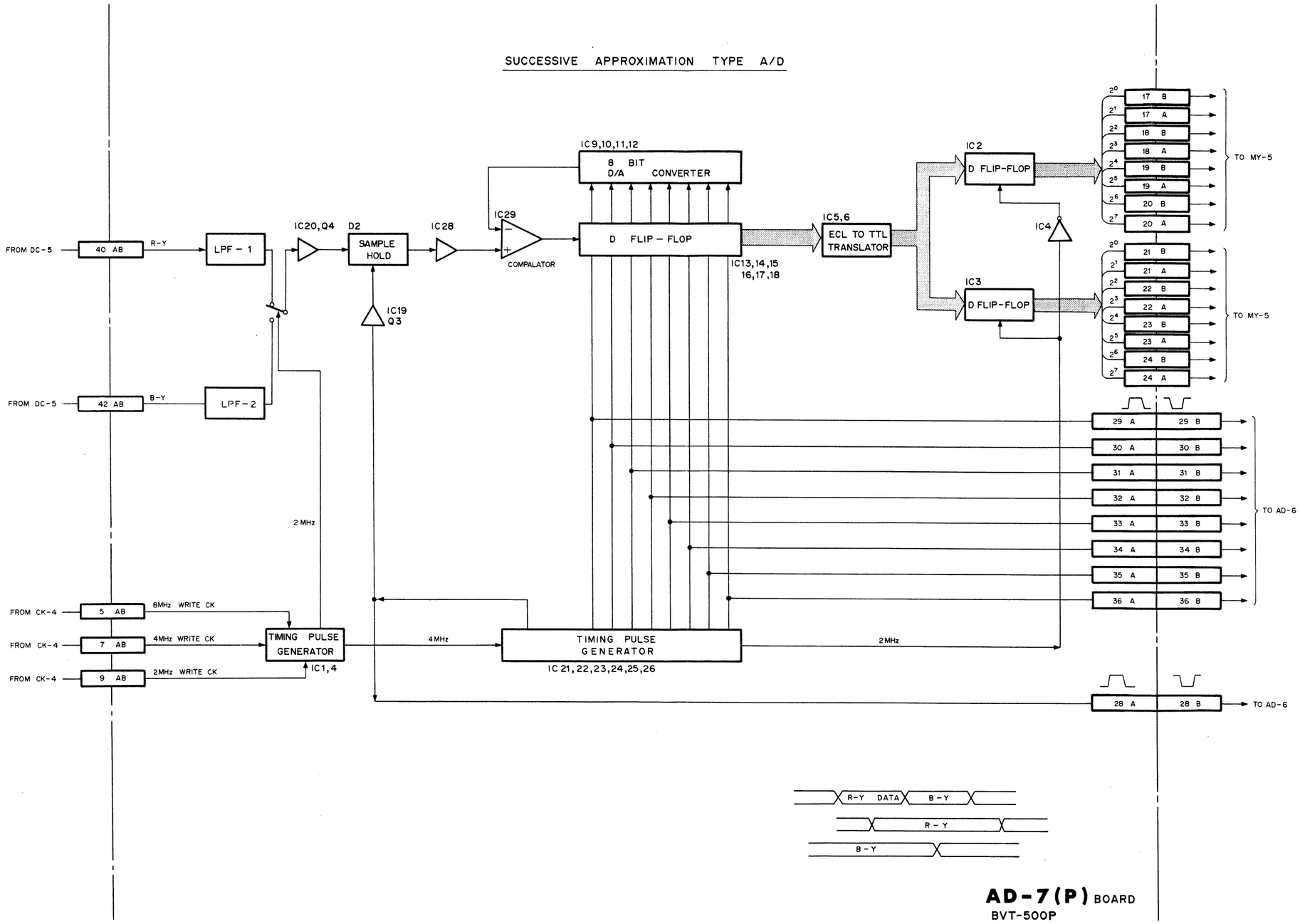
SS-12 BOARD
BVT-500P
BVT-500S

⑧ AD-6 BOARD: Y A-D CONVERTER



AD-6 BOARD
BVT-500P
BVT-500S

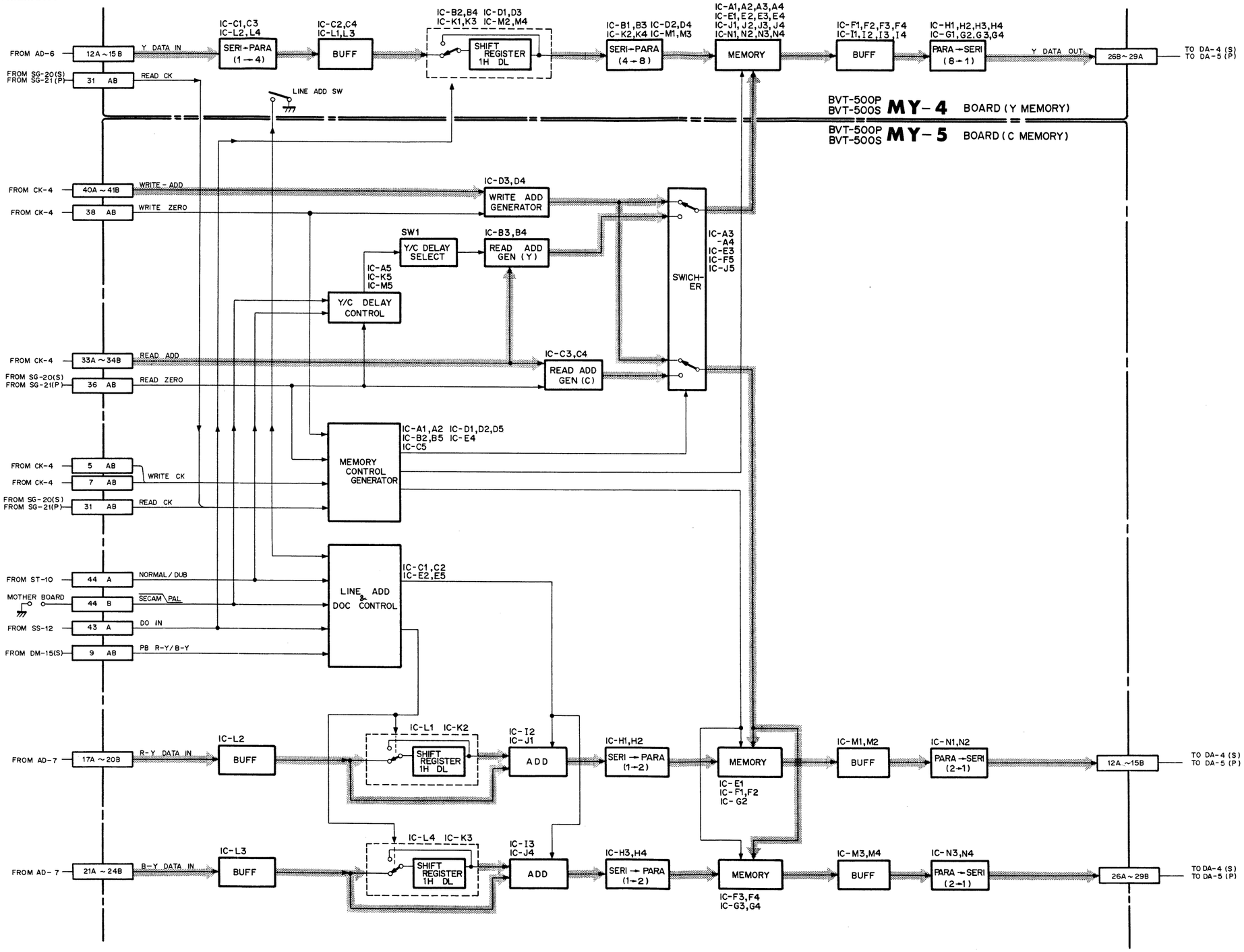
⑦ AD-7 (P) BOARD: CHROMA A-D CONVERTER



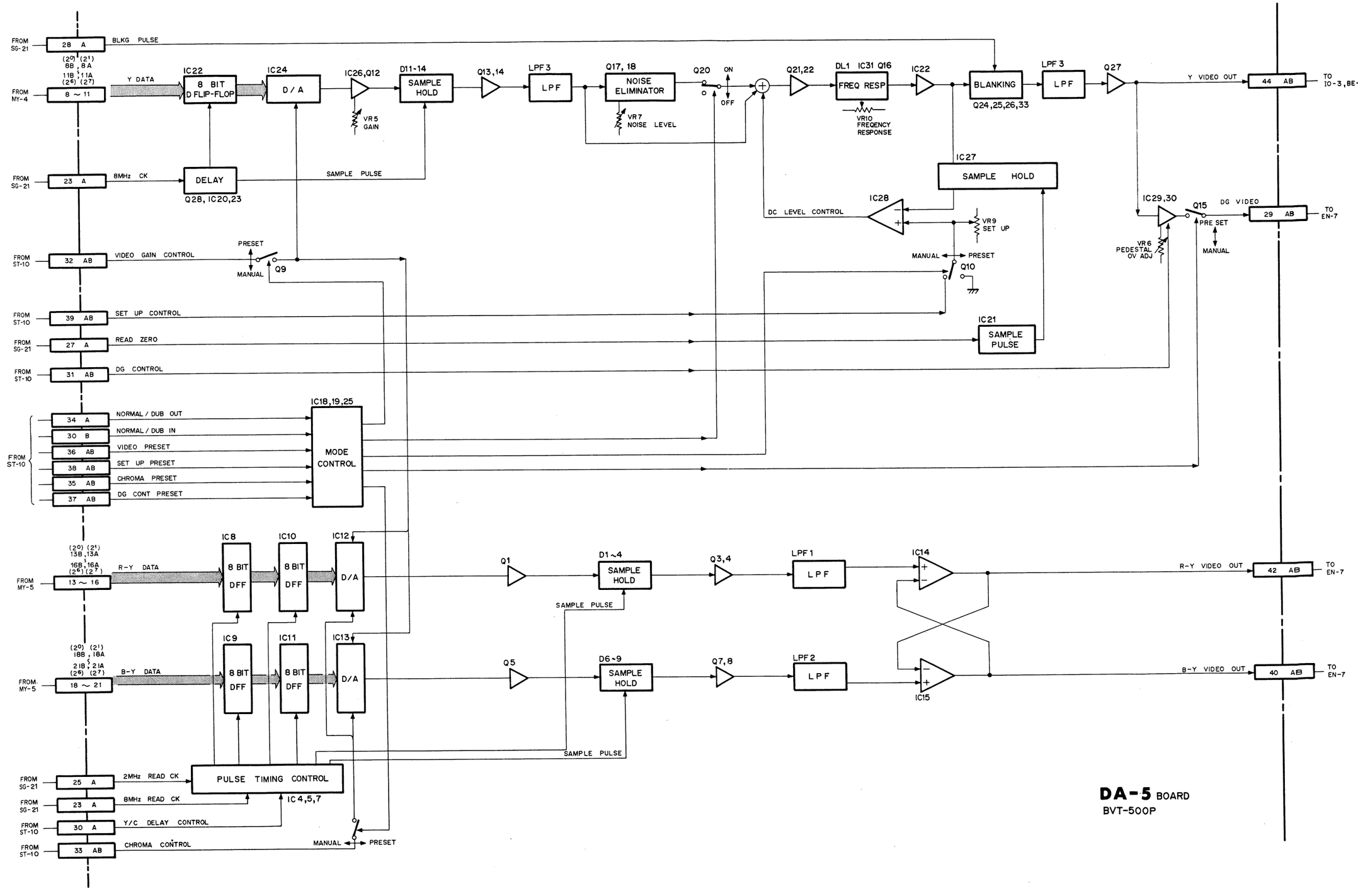
AD-7 (P) BOARD
BVT-500P

⑥ **MY-4** **BOARD: Y 4-LINE MEMORY**

⑤ **MY-5** **BOARD: C 4-LINE MEMORY**

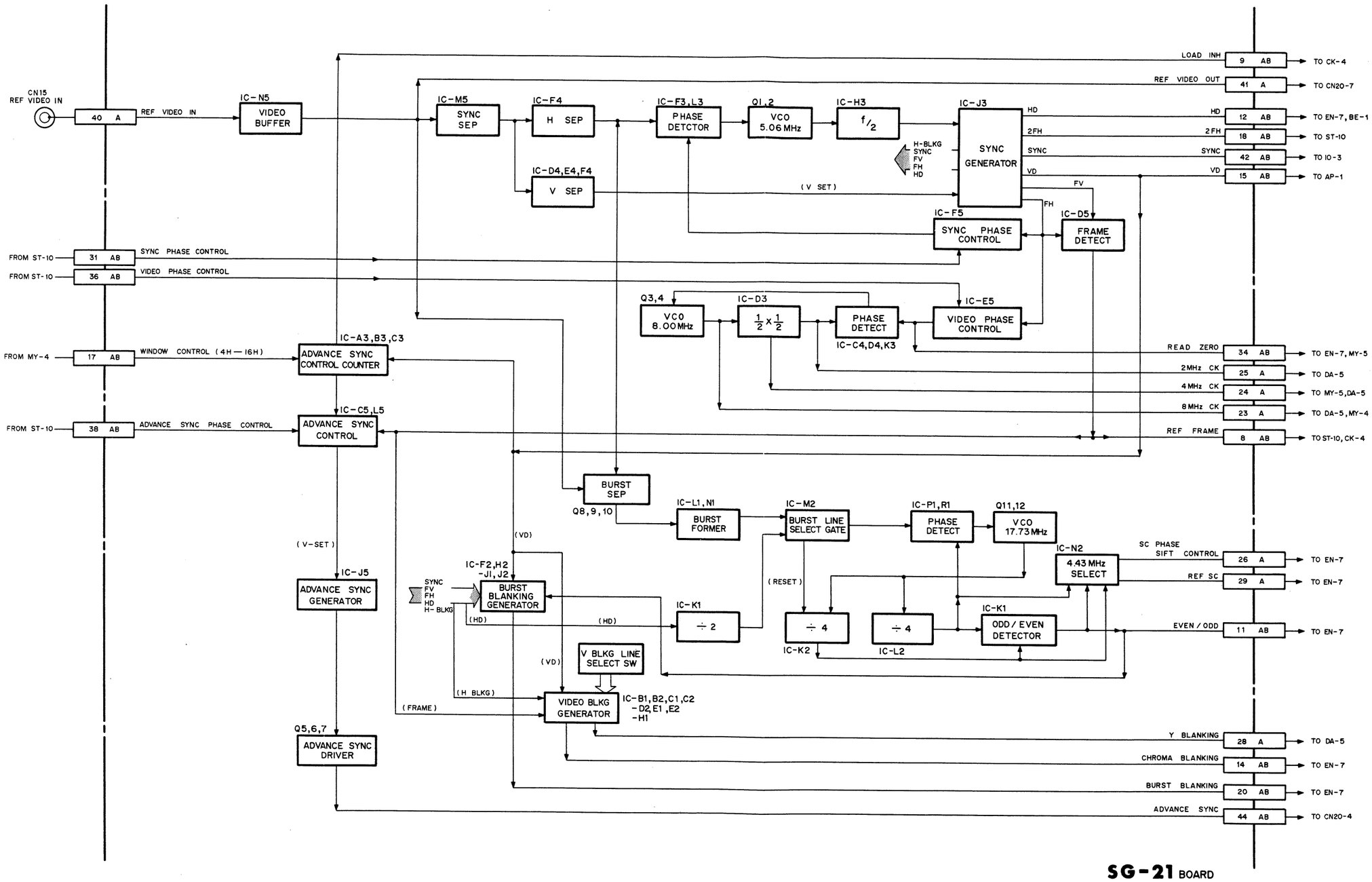


④ DA-5 BOARD: D-A CONVERTER



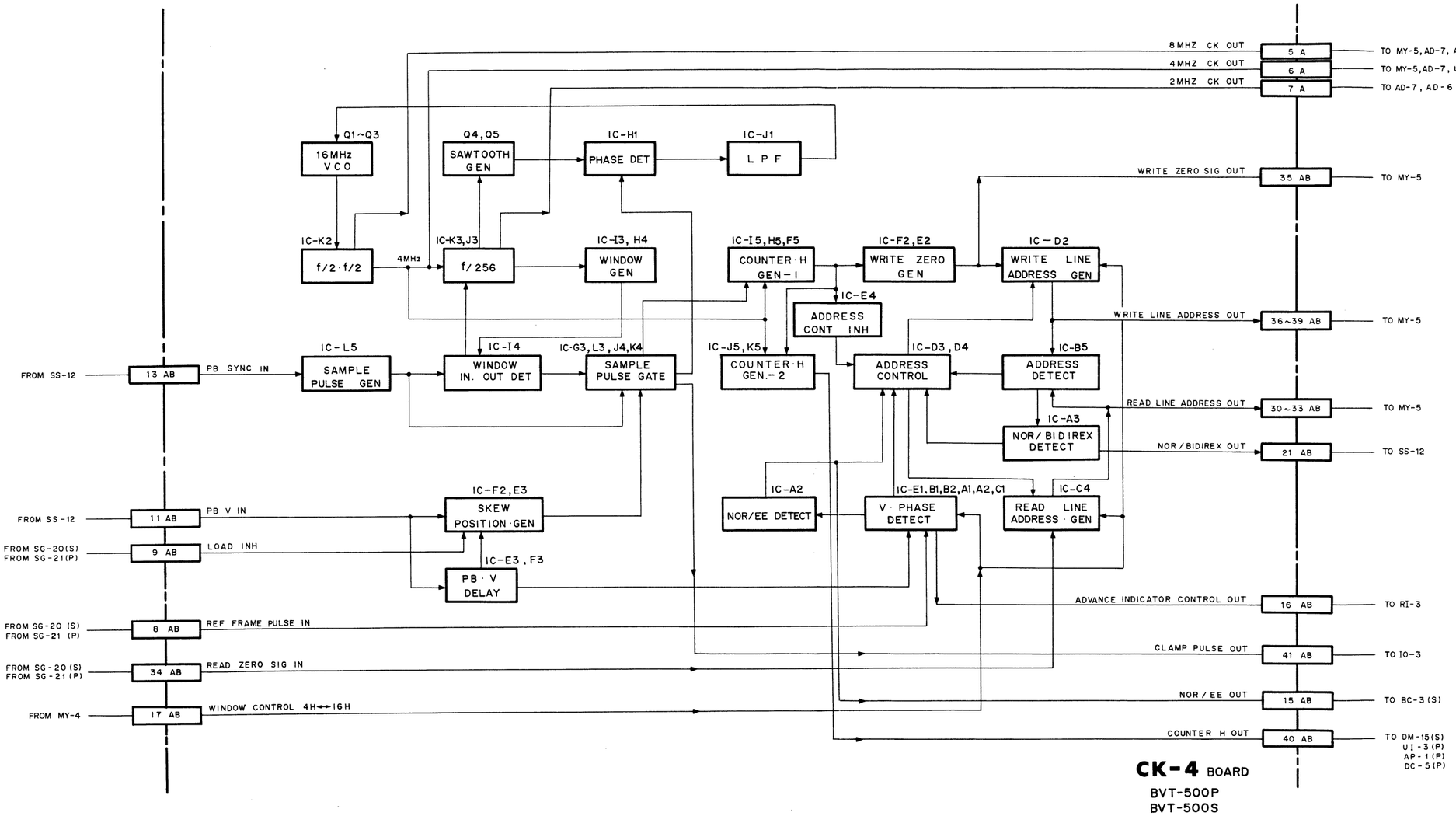
DA-5 BOARD
BVT-500P

③ SG-21 BOARD: SYNC GENERATOR



SG-21 BOARD
BVT-500P

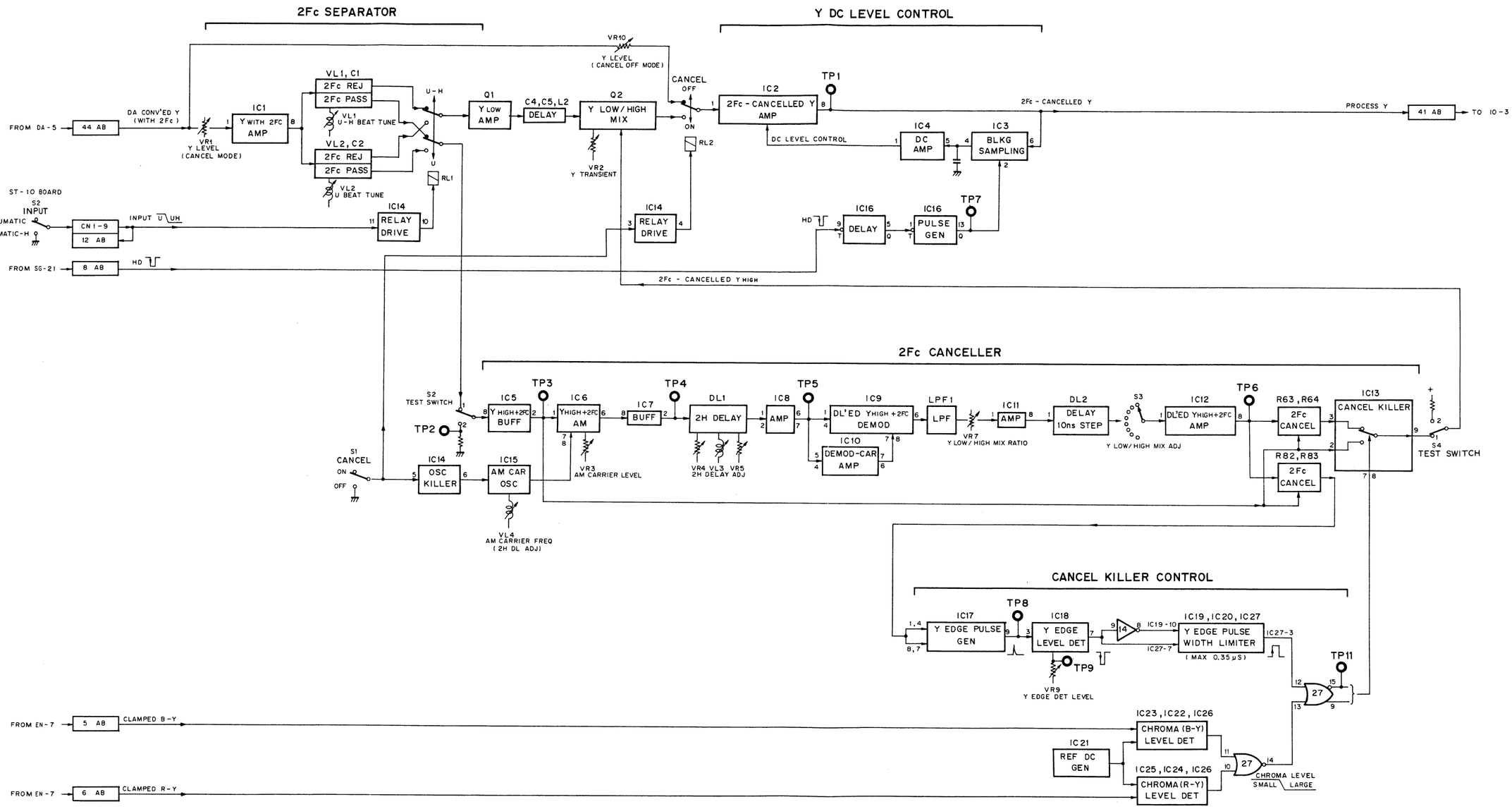
② CK-4 BOARD: CLOCK GENERATOR



CK-4 BOARD
BVT-500P
BVT-500S

BLOCK DIAGRAM ① BE-1

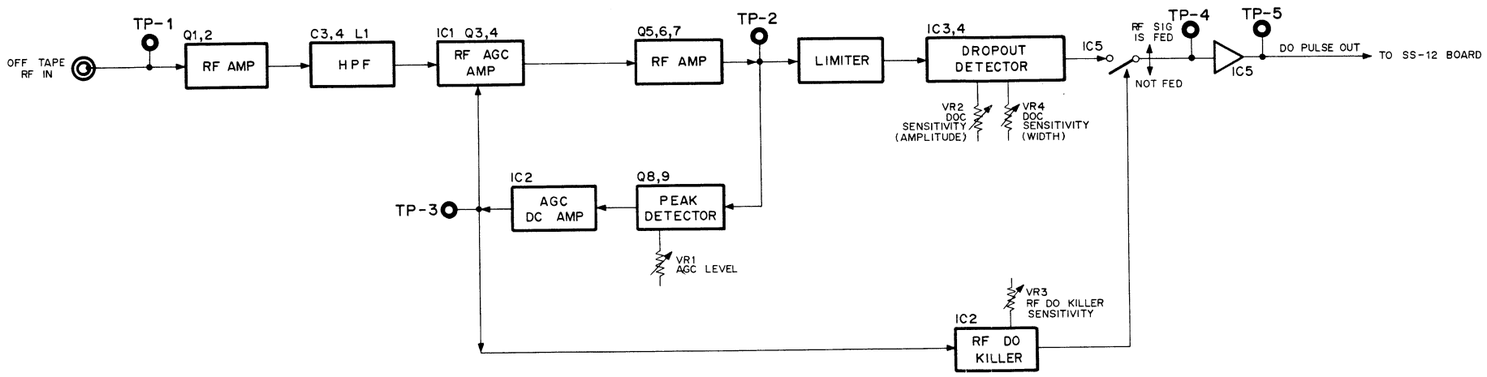
① BE-1 BOARD: BEAT CANCELLER



BE-1 BOARD
BVT-500P

BLOCK DIAGRAM **DO-10**

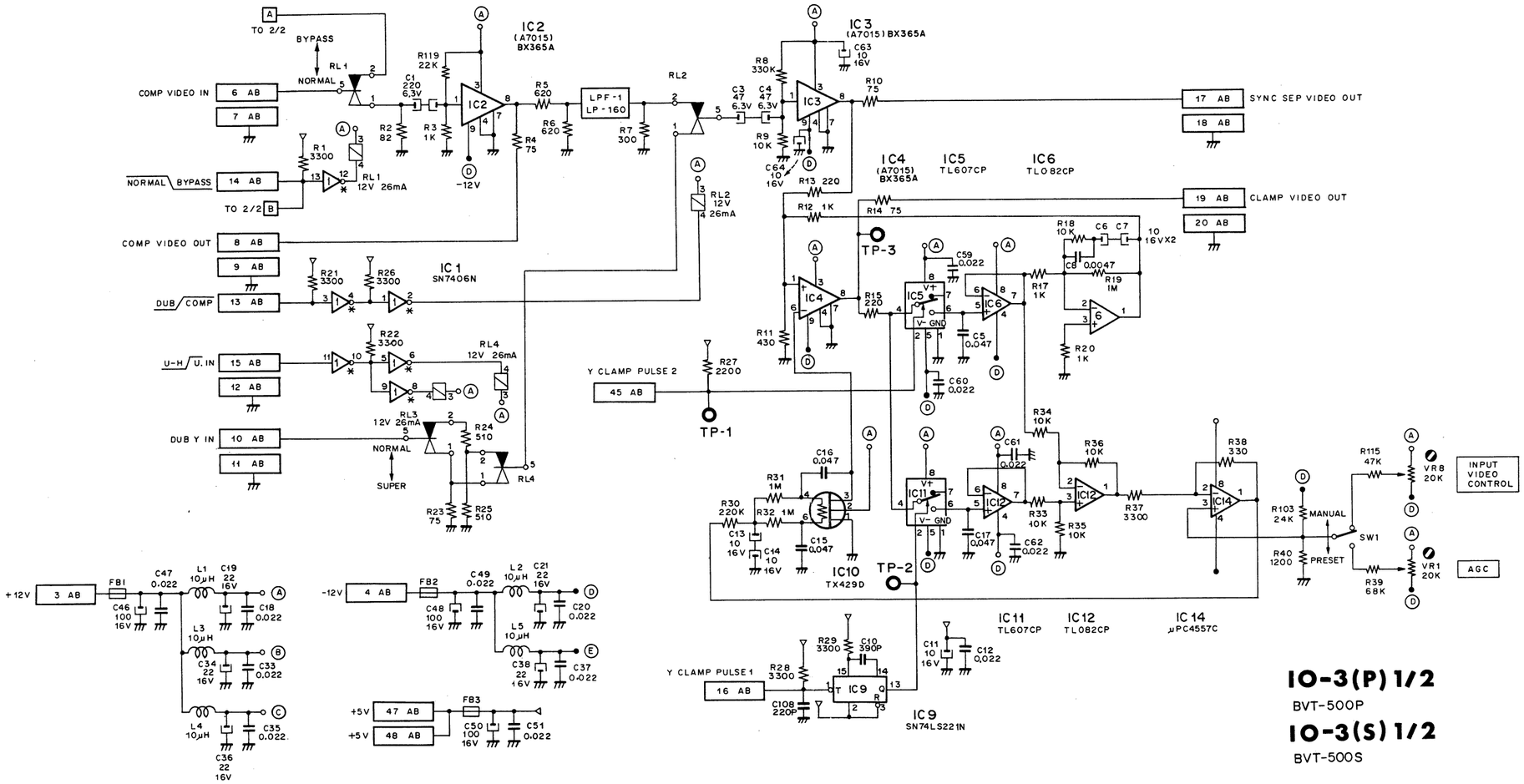
DO-10 BOARD: DROPOUT PULSE GENERATOR



DO-10 BOARD
BVT-500P
BVT-500S

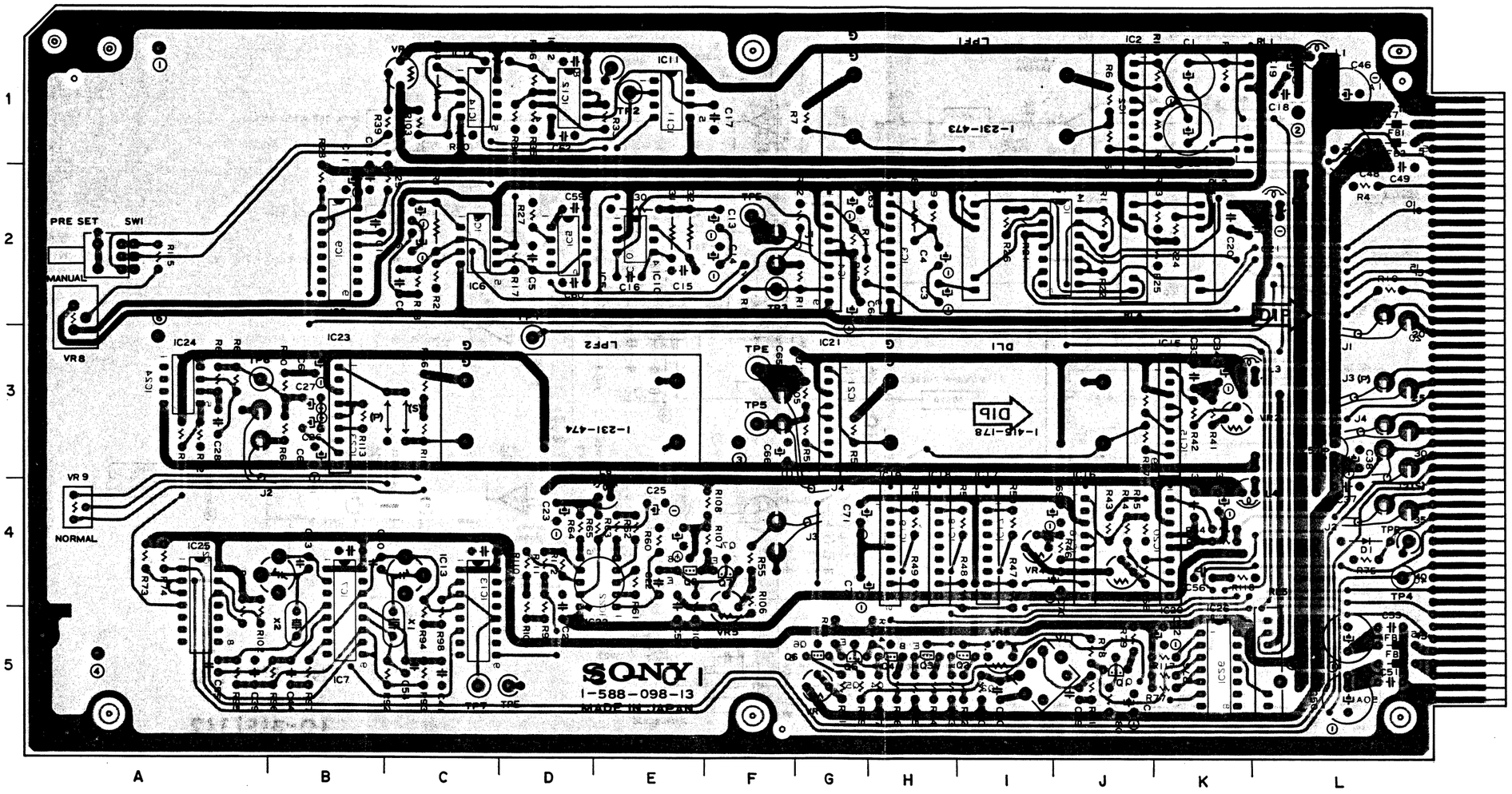
SECTION 3
SCHEMATIC DIAGRAMS & BOARD LAYOUT

⑯ IO-3 (P) BOARD (1/2) : INPUT/OUTPUT VIDEO AMPLIFIER



IO-3(P) 1/2
BVT-500P
IO-3(S) 1/2
BVT-500S

⑯ IO-3 BOARD (1-588-098-13)
– COMPONENT SIDE –



BVT-500P
BVT-500S
IO-3 (1-588-098-13)

CV1 C - 4
CV2 B - 4

D1 L - 4
(SECAM)

DL1 I - 3

IC1 J - 2
IC2 J - 1
IC3 H - 2
IC4 G - 2
IC5 D - 2
IC6 C - 2
IC7 B - 4
IC9 B - 2
IC10 E - 2
IC11 E - 1
IC12 D - 1
IC13 C - 4
IC14 C - 1
IC15 K - 3
IC16 J - 4
IC17 I - 4
IC18 H - 4
IC19 H - 4
IC20 K - 4
IC21 G - 3
IC22 E - 4
IC23 B - 3
IC24 A - 3
IC25 A - 4
IC26 K - 6

Q1 J - 5
Q2 I - 5
Q3 H - 5
Q4 H - 5
Q5 G - 5
Q6 G - 5
Q7 F - 4
Q8 E - 4

SW1 A - 2

TP1 D - 3
TP2 E - 1
TP3 F - 2
TP4 L - 4
TP5 F - 3
TP6 A - 3
TP7 C - 5

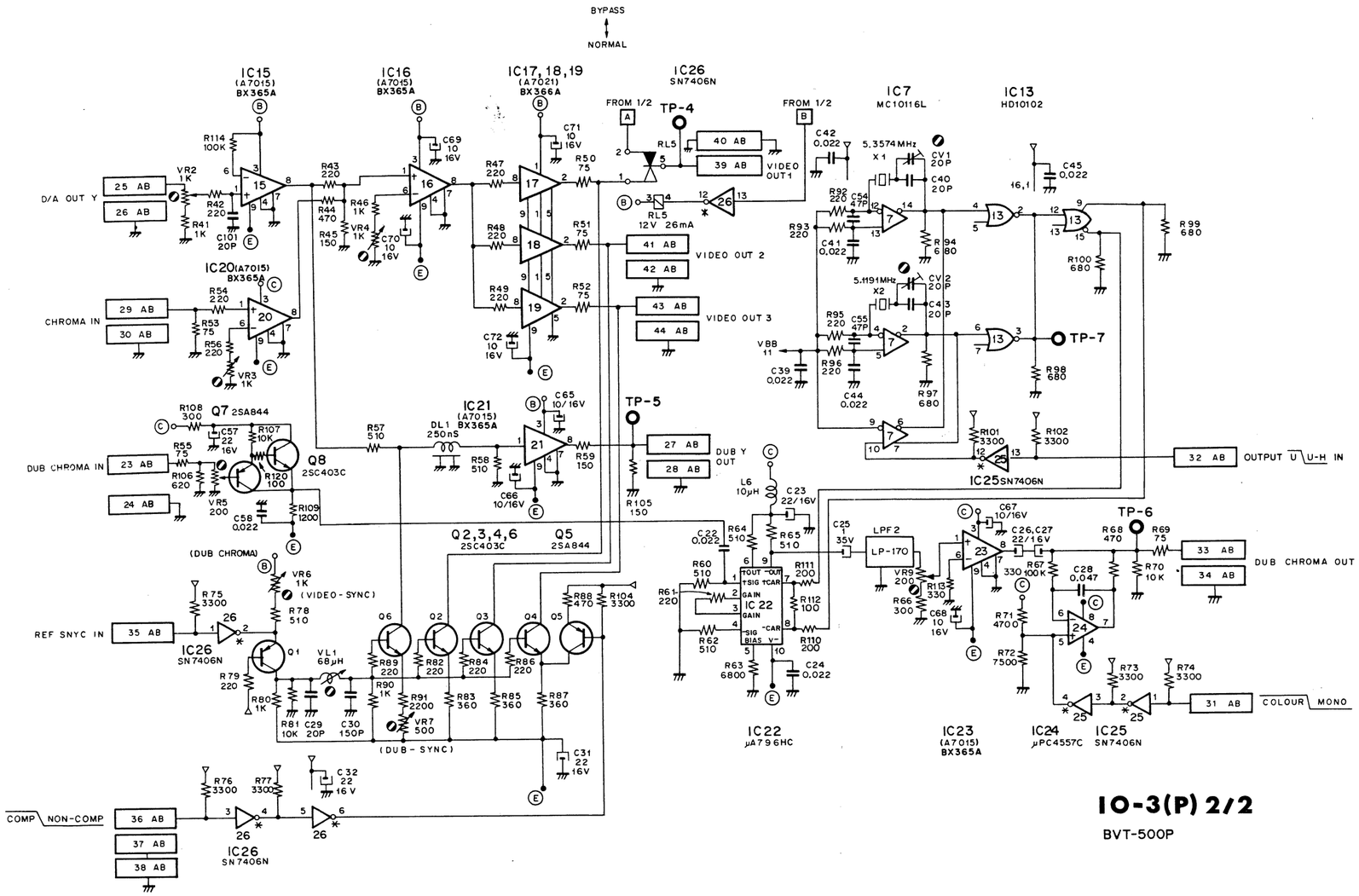
TPE2 E - 1
TPE3 F - 2
TPE4 F - 3
TPE5 L - 4

VL1 I - 5

VR1 C - 1
VR2 K - 3
VR3 J - 4
VR4 I - 4
VR5 F - 5
VR6 I - 5
VR7 G - 5
VR8 A - 2

VR9 A - 4
(PAL)

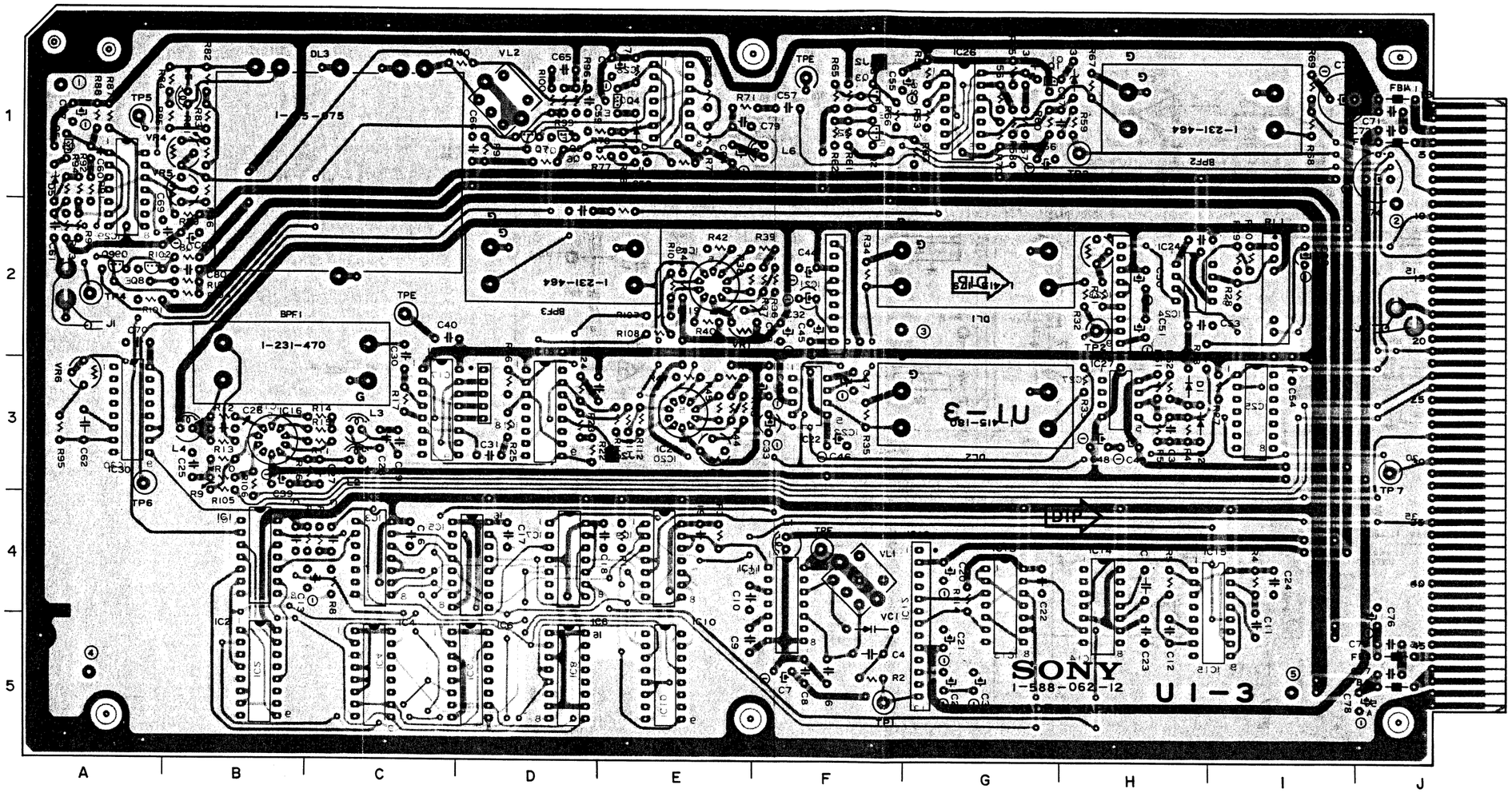
⑯ IO-3 (P) BOARD (2/2) : INPUT/OUTPUT VIDEO AMPLIFIER



IO-3(P) 2/2

BVT-500P

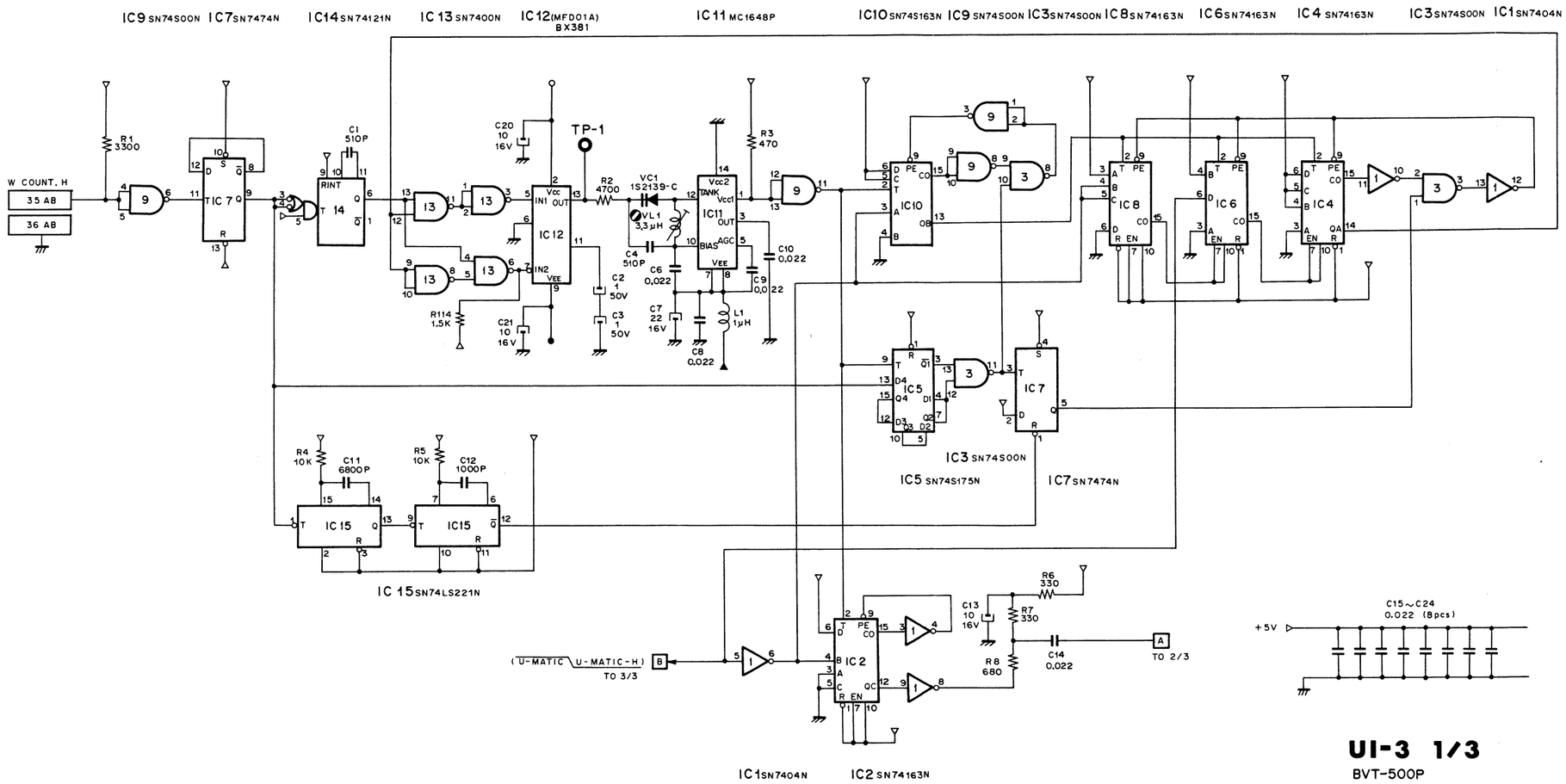
⑮ **UI-3 BOARD (1-588-062-12)**
– COMPONENT SIDE –



BVT-500P
UI-3 (1-588-062-12)

D1	H - 3		VC1	F - 5	
D2	H - 3				
D3	H - 1		VL1	F - 4	
D4	E - 1		VL2	D - 1	
D5	A - 1				
			VR1	E - 2	
DL1	G - 2		VR2	E - 3	
DL2	G - 3		VR3	H - 2	
DL3	C - 1		VR4	B - 1	
			VR5	B - 1	
IC1	B - 4		VR6	A - 3	
IC2	B - 5				
IC3	C - 4				
IC4	C - 5				
IC5	D - 4				
IC6	D - 5				
IC7	D - 4				
IC8	D - 5				
IC9	E - 4				
IC10	E - 5				
IC11	F - 4				
IC12	G - 4				
IC13	G - 4				
IC14	H - 4				
IC15	I - 4				
IC16	B - 3				
IC17	C - 3				
IC18	D - 3				
IC19	E - 2				
IC20	E - 3				
IC21	F - 2				
IC22	F - 3				
IC23	H - 2				
IC24	H - 2				
IC25	I - 3				
IC26	G - 1				
IC27	H - 3				
IC28	E - 1				
IC29	A - 1				
IC30	A - 3				
Q1	G - 1				
Q2	F - 1				
Q3	F - 1				
Q4	E - 1				
Q5	A - 1				
Q6	D - 1				
Q7	D - 1				
Q8	A - 2				
Q9	A - 2				
TP1	F - 5				
TP2	H - 2				
TP3	H - 1				
TP4	A - 2				
TP5	A - 1				
TP6	A - 3				
TP7	J - 3				
TPE1	C - 2				
TPE2	F - 1				
TPE3	F - 4				

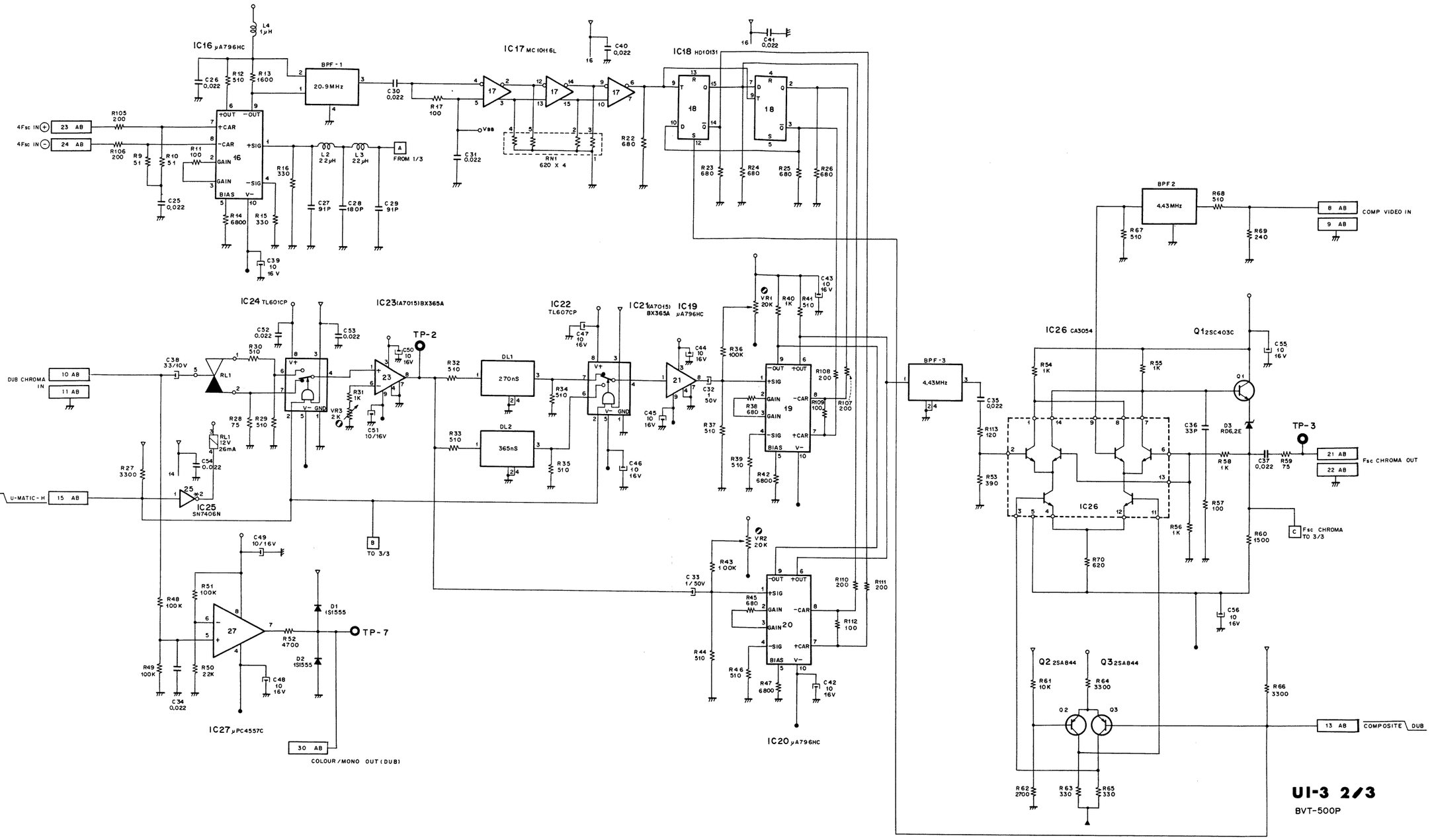
⑮ UI-3 BOARD (1/3) : U-MATIC INTERFACE

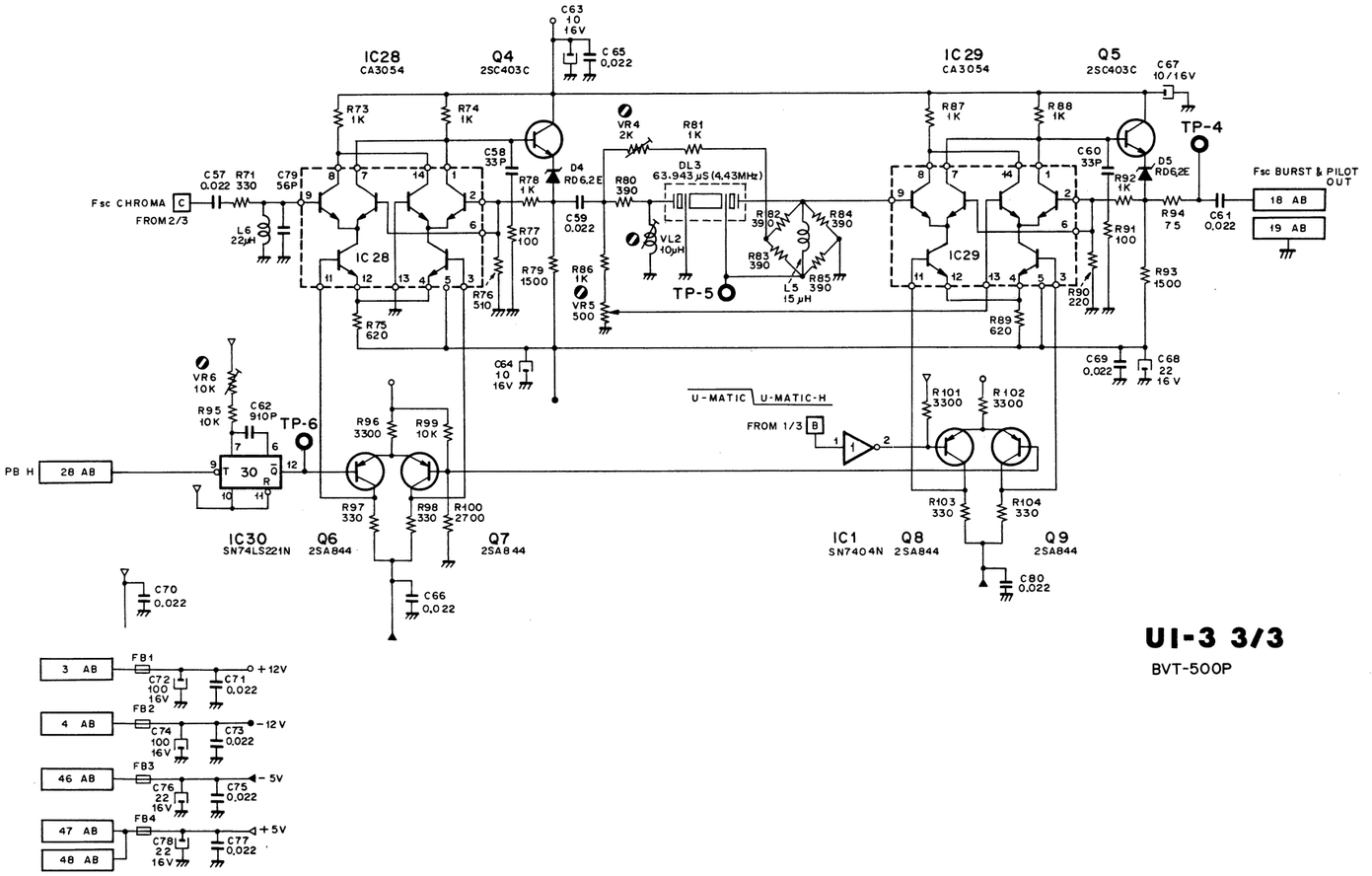


UI-3 1/3

BVT-500P

⑮ UI-3 BOARD (2/3) : U-MATIC INTERFACE



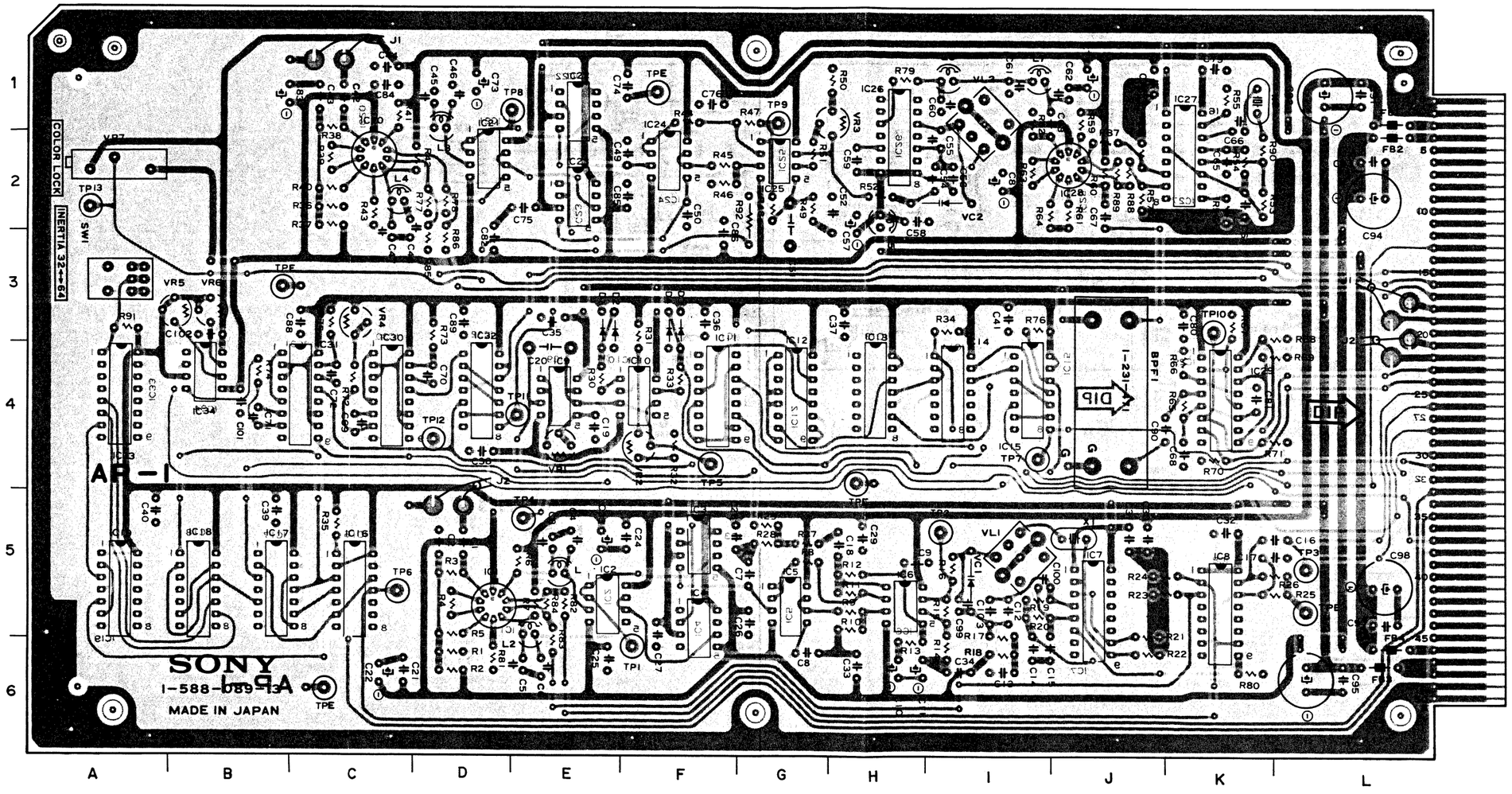


UI-3 3/3

BVT-500P

⑭ AP-1 BOARD (1-588-089-13)

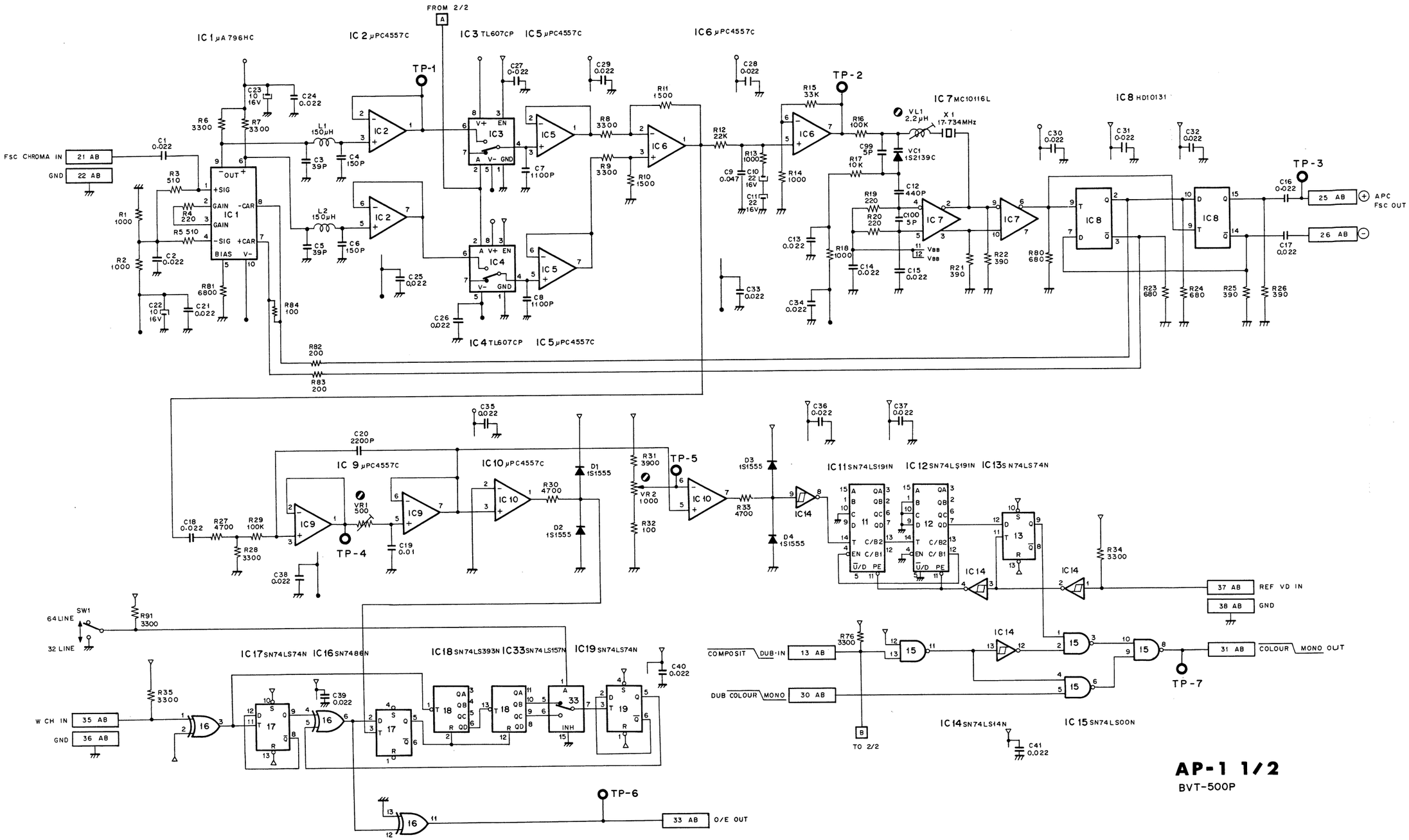
– COMPONENT SIDE –



BVT-500P
AP-1 (1-588-089-13)

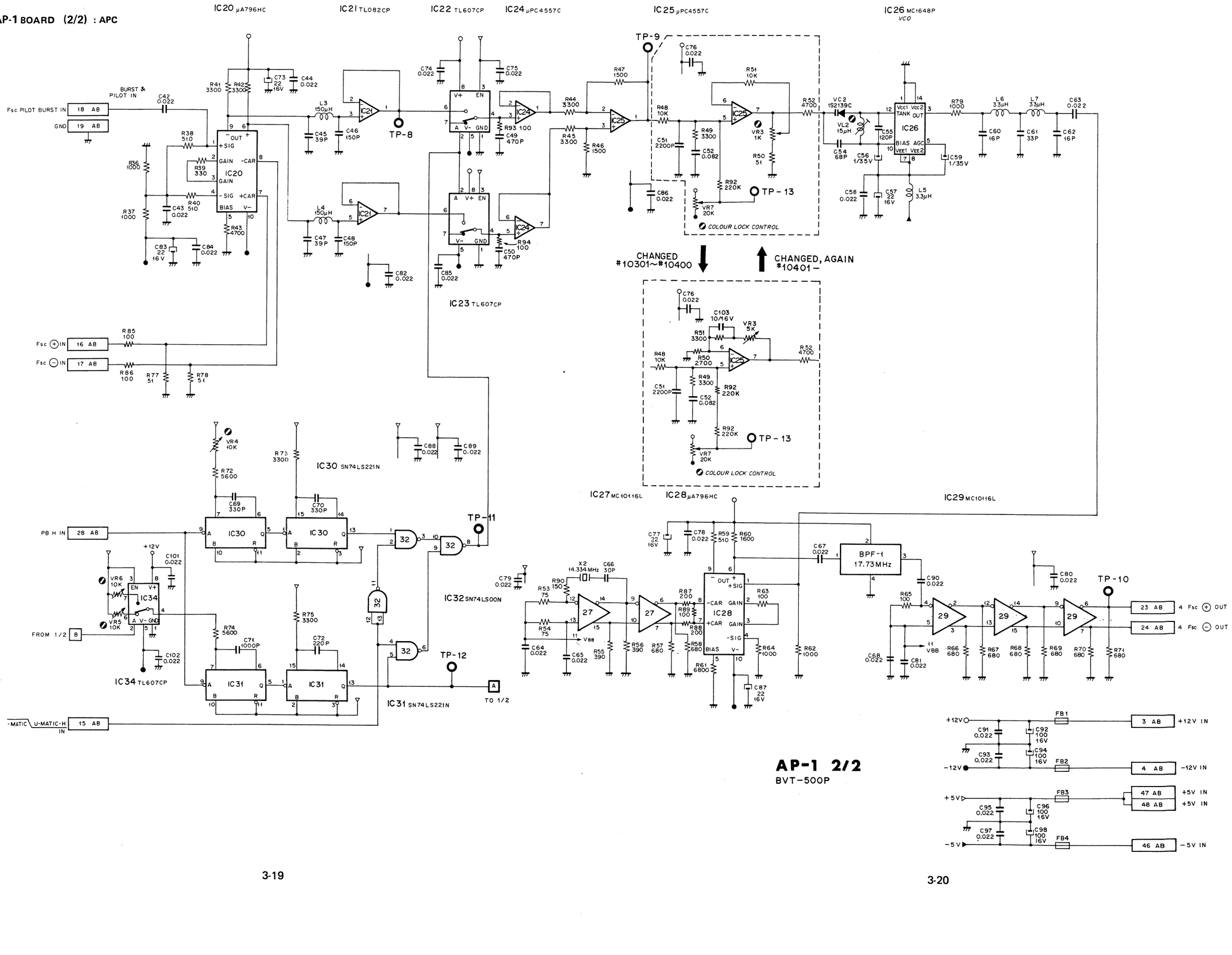
D1	E-3			TPE	B-3
D2	E-3			TPE	C-6
D3	F-3			TPE	F-1
D4	F-3			TPE	H-4
				TPE	L-5
IC1	D-5				
IC2	E-5			VC1	I-5
IC3	F-5			VC2	I-2
IC4	F-5				
IC5	G-5			VL1	I-5
IC6	H-5			VL2	I-1
IC7	J-5				
IC8	K-5			VR1	E-4
IC9	E-4			VR2	F-4
IC10	F-4			VR3	H-1
IC11	F-4			VR4	C-3
IC12	G-4			VR5	B-3
IC13	H-4			VR6	B-3
IC14	I-4			VR7	A-2
IC15	I-4				
IC16	C-5				
IC17	B-5				
IC18	B-5				
IC19	A-5				
IC20	C-2				
IC21	D-2				
IC22	E-1				
IC23	E-2				
IC24	F-2				
IC25	G-2				
IC26	H-2				
IC27	K-2				
IC28	J-2				
IC29	K-4				
IC30	C-4				
IC31	C-4				
IC32	D-4				
IC33	A-4				
IC34	B-4				
SW1	A-3				
TP1	F-6				
TP2	I-5				
TP3	L-5				
TP4	E-5				
TP5	F-4				
TP6	C-5				
TP7	I-4				
TP8	E-1				
TP9	G-1				
TP10	K-3				
TP11	E-4				
TP12	D-4				
TP13	A-2				

⑭ AP-1 BOARD (1/2) : APC



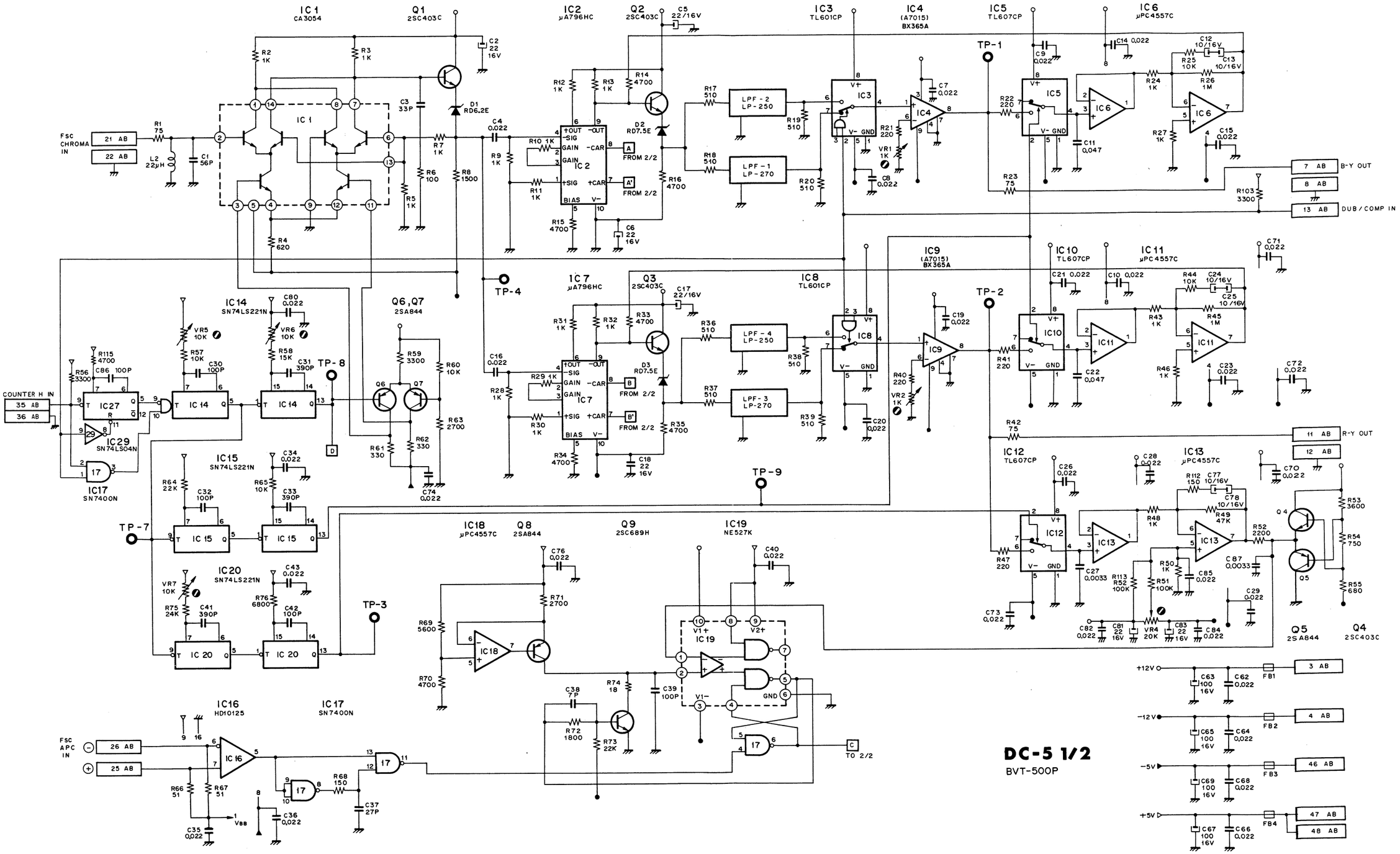
AP-1 1/2
BVT-500P

⑭ AP-1 BOARD (2/2) : APC



AP-1 2/2
BVT-500P

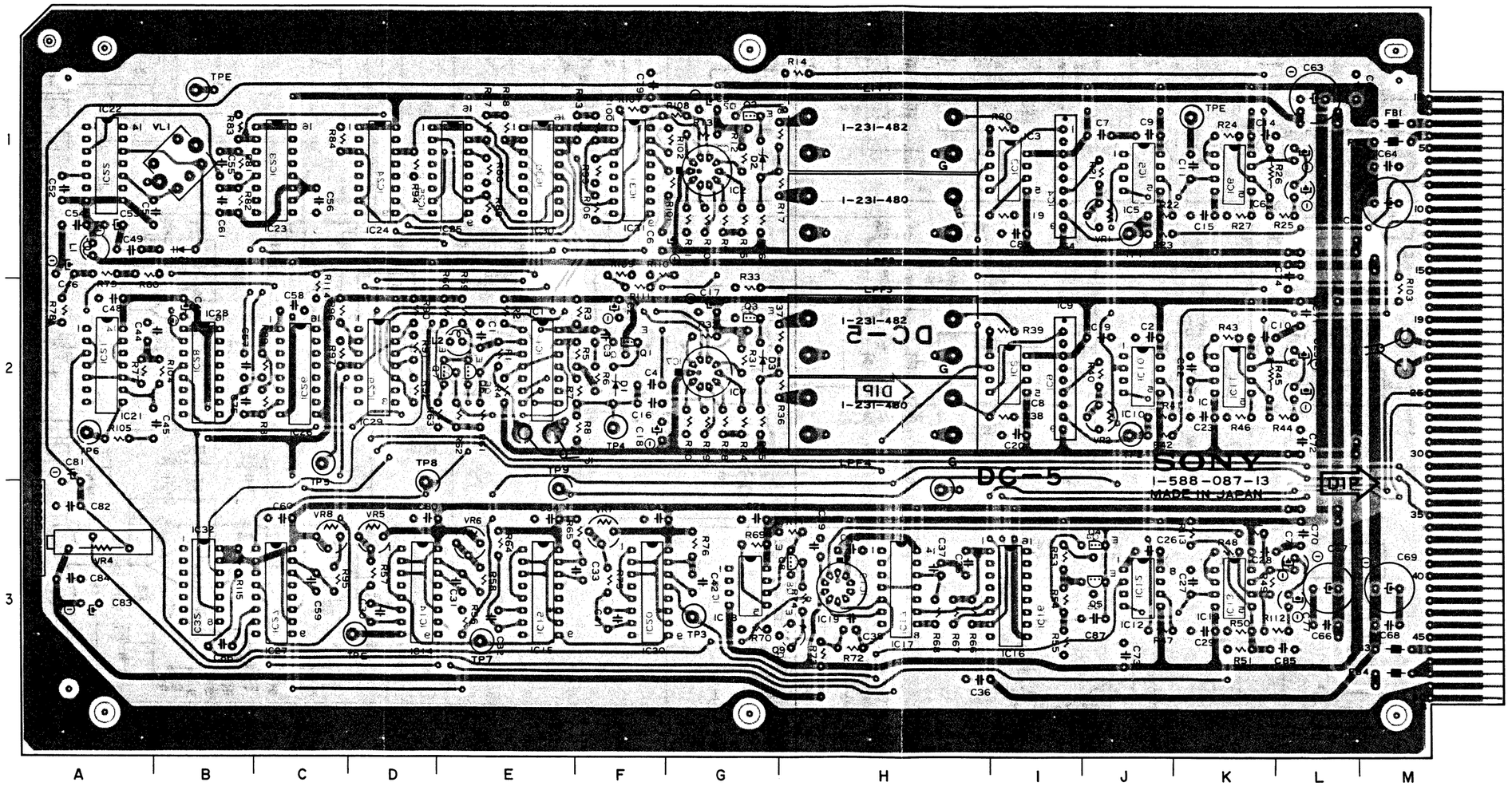
⑬ DC-5 BOARD (1/2) : CHROMA DECODER



DC-5 1/2
BVT-500P

⑬ DC-5 BOARD (1-588-087-13)

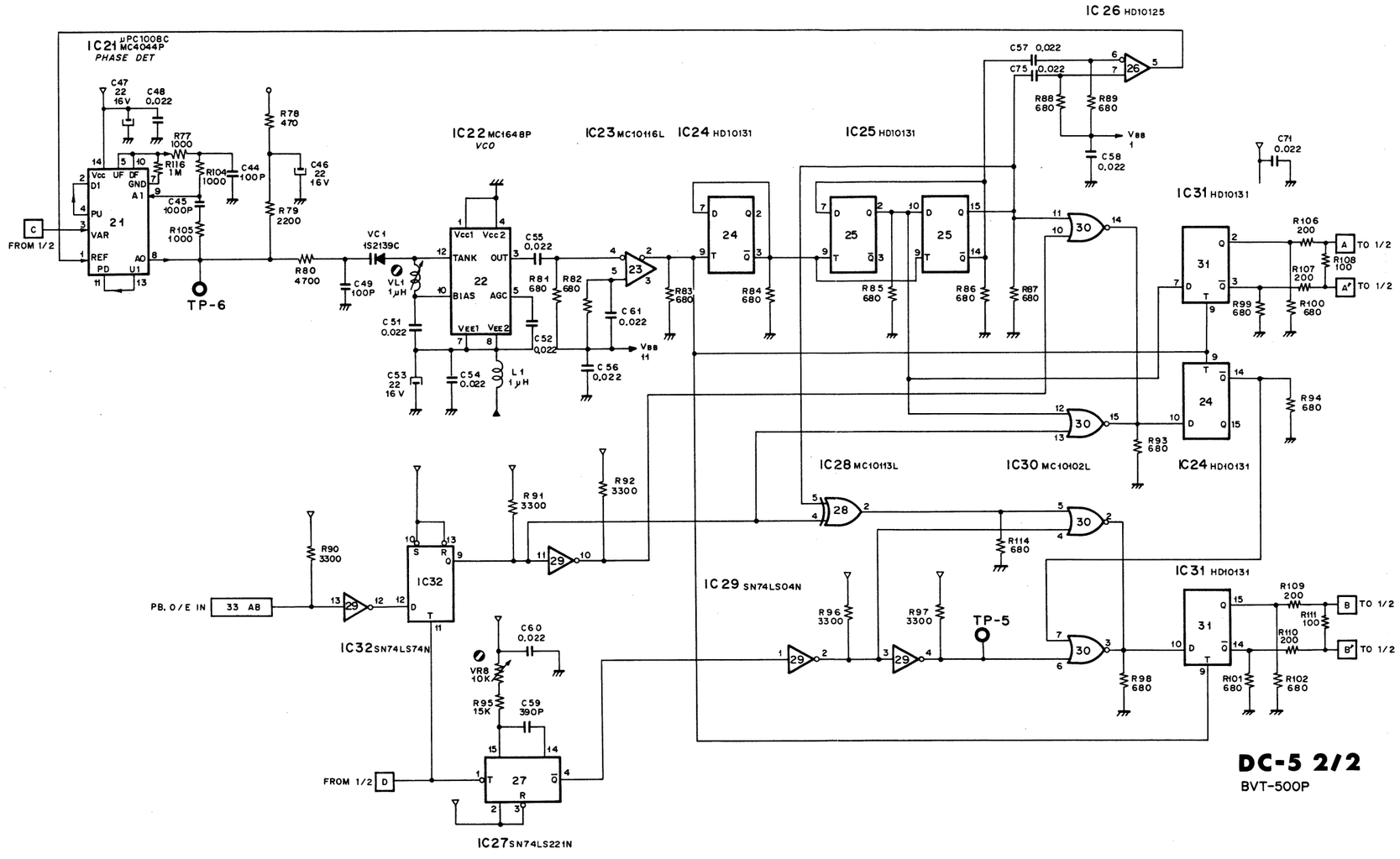
– COMPONENT SIDE –



BVT-500P
DC-5 (1-588-087-13)

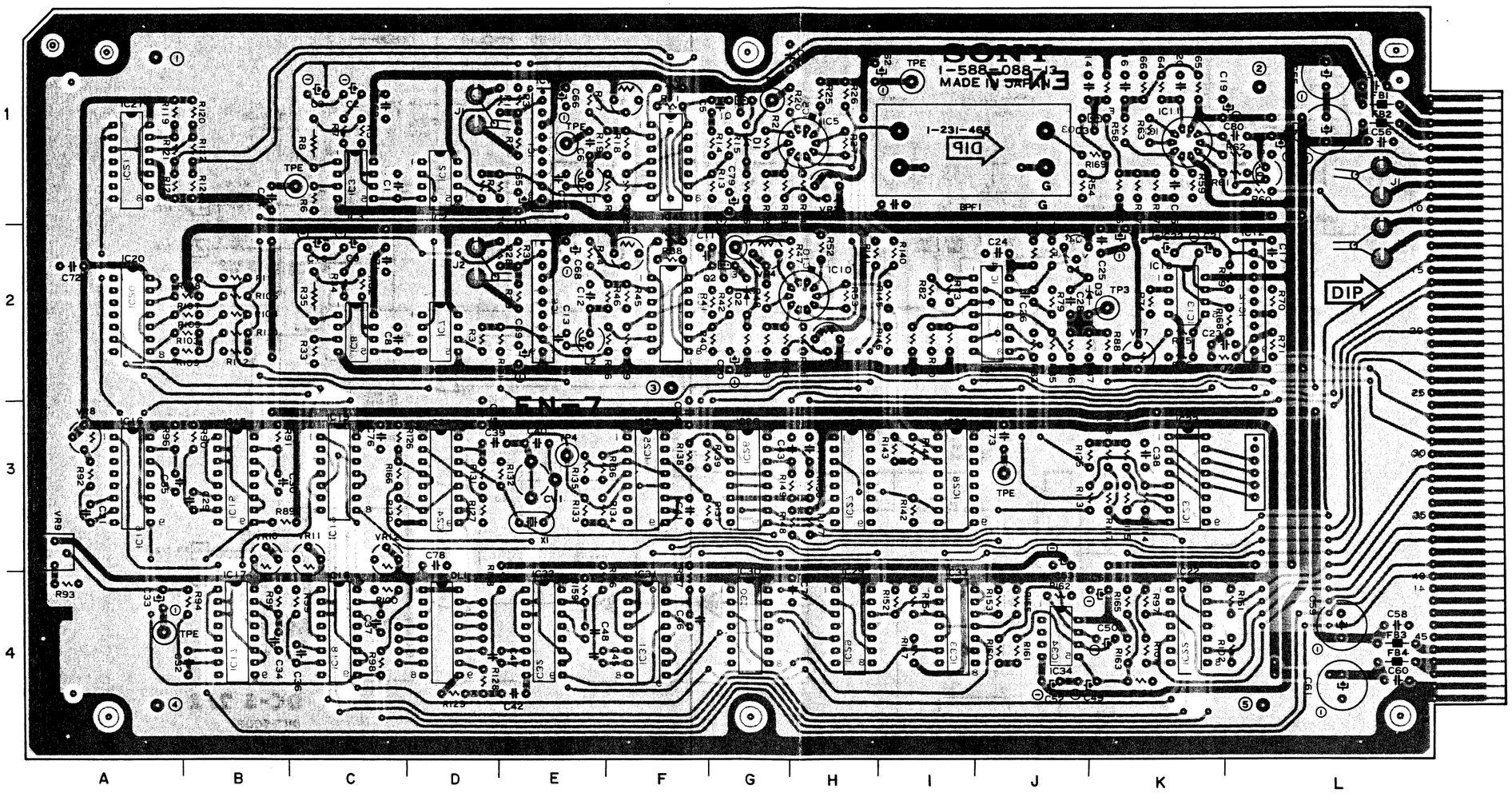
D1	F - 2	TPE1	B - 1
D2	G - 1	TPE2	D - 3
D3	G - 2	TPE3	H - 3
		TPE4	K - 1
IC1	E - 2		
IC2	G - 1	VC1	B - 1
IC3	I - 1		
IC4	I - 1	VL1	B - 1
IC5	J - 1		
IC6	K - 1	VR1	J - 1
IC7	G - 2	VR2	J - 2
IC8	I - 2	VR4	A - 3
IC9	I - 2	VR5	D - 3
IC10	J - 2	VR6	E - 3
IC11	K - 2	VR7	F - 3
IC12	J - 3	VR8	C - 3
IC13	K - 3		
IC14	D - 3		
IC15	E - 3		
IC16	I - 3		
IC17	H - 3		
IC18	G - 3		
IC19	H - 3		
IC20	F - 3		
IC21	A - 2		
IC22	A - 1		
IC23	C - 1		
IC24	D - 1		
IC25	E - 1		
IC26	C - 2		
IC27	C - 3		
IC28	B - 2		
IC29	D - 2		
IC30	E - 1		
IC31	F - 1		
IC32	B - 3		
Q1	F - 2		
Q2	G - 1		
Q3	G - 2		
Q4	J - 3		
Q5	J - 3		
Q6	E - 2		
Q7	E - 2		
Q8	H - 3		
Q9	H - 3		
TP1	J - 1		
TP2	J - 2		
TP3	G - 3		
TP4	F - 2		
TP5	C - 2		
TP6	A - 2		
TP7	E - 3		
TP8	D - 3		
TP9	E - 3		

⑬ DC-5 BOARD (2/2) : CHROMA DECODER



DC-5 2/2
BVT-500P

⑫ EN-7 BOARD (1-588-088-13)
– COMPONENT SIDE –



BVT-500P
EN-7 (1-588-088-13)

CV1 E - 3

D1 G - 1
D2 G - 2
D3 K - 2

DL1 D - 4

IC1 E - 1
IC2 D - 1
IC3 C - 1
IC4 F - 1
IC5 H - 1
IC6 E - 2
IC7 D - 2
IC8 C - 2
IC9 F - 2
IC10 H - 2
IC11 K - 1
IC12 L - 2
IC13 K - 2
IC14 J - 2
IC15 B - 3
IC16 A - 3
IC17 B - 4
IC18 C - 4
IC19 C - 3
IC20 A - 2
IC21 A - 1
IC22 K - 4
IC23 K - 3
IC24 D - 3
IC25 F - 3
IC26 G - 3
IC27 H - 3
IC28 I - 3
IC29 H - 4
IC30 G - 4
IC31 F - 4
IC32 E - 4
IC33 I - 4
IC34 J - 4

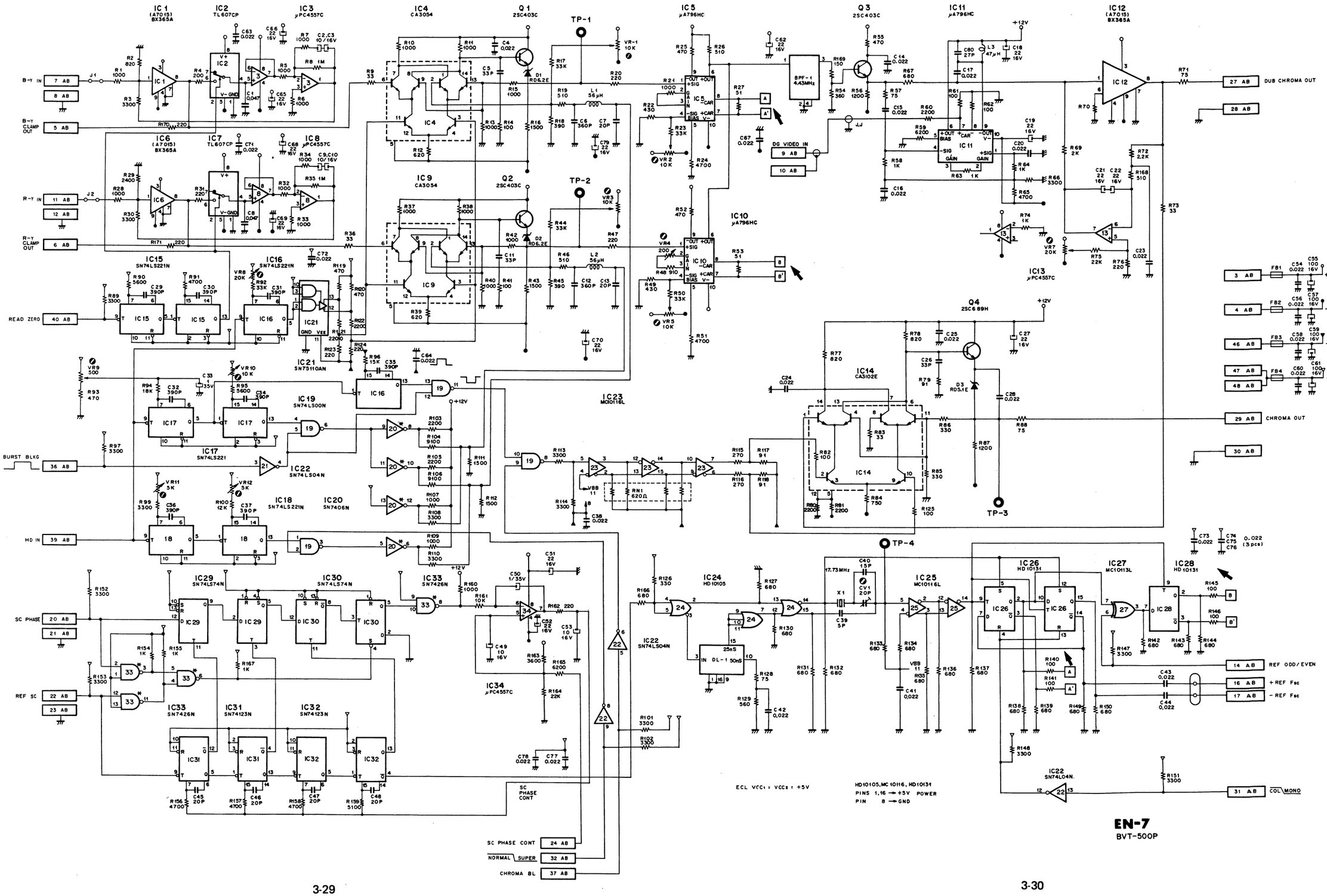
Q1 G - 1
Q2 G - 2
Q3 K - 1
Q4 J - 2

TP1 G - 1
TP2 G - 2
TP3 K - 2
TP4 E - 3

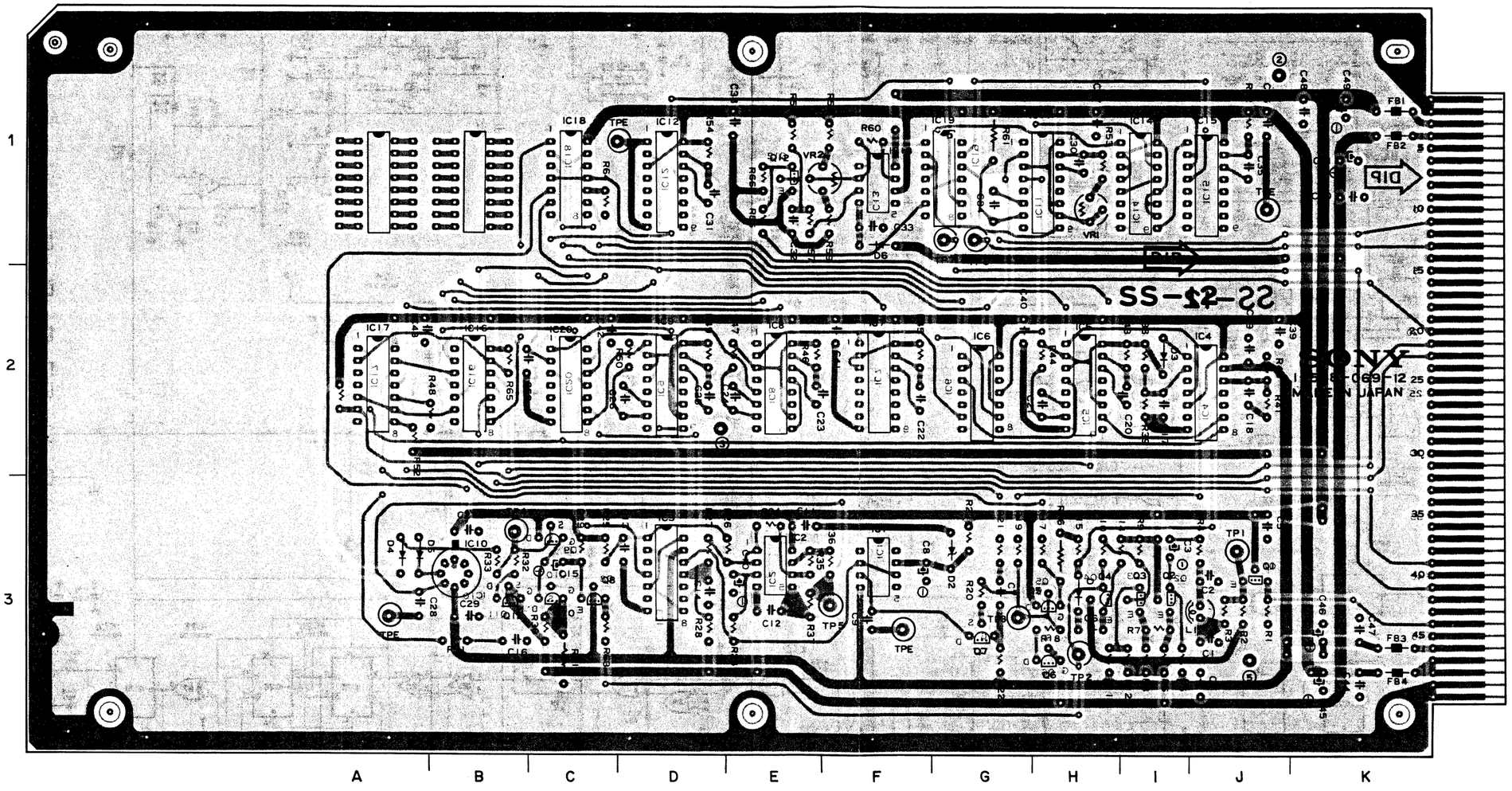
TPE1 A - 4
TPE2 C - 1
TPE3 E - 1
TPE4 I - 1
TPE5 J - 3

VR1 F - 1
VR2 H - 1
VR3 F - 2
VR4 G - 2
VR5 H - 2
VR7 K - 2
VR8 A - 3
VR9 A - 3
VR10 B - 3
VR11 C - 3
VR12 C - 3

⑫ EN-7 BOARD: CHROMA ENCODER



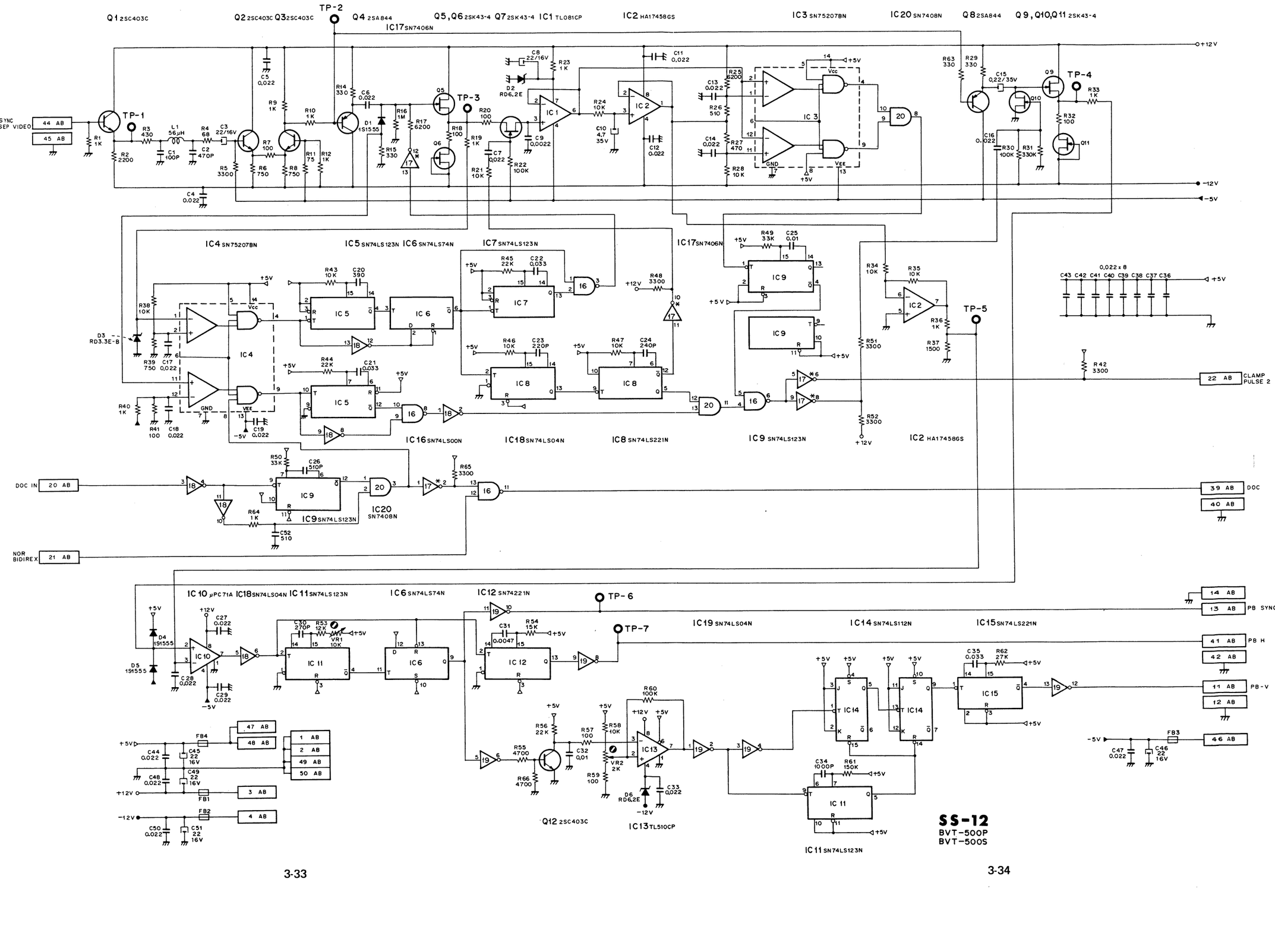
⑨ SS-12 BOARD (1-588-069-12)
– COMPONENT SIDE –



BVT-500P
BVT-500S
SS-12 (1-588-069-12)

D1	H - 3
D2	G - 3
D3	I - 2
D4	A - 3
D5	A - 3
D6	F - 1
IC1	F - 3
IC2	E - 3
IC3	D - 3
IC4	J - 2
IC5	H - 2
IC6	G - 2
IC7	F - 2
IC8	E - 2
IC9	D - 2
IC10	B - 3
IC11	H - 1
IC12	D - 1
IC13	F - 1
IC14	I - 1
IC15	J - 1
IC16	B - 2
IC17	A - 2
IC18	C - 1
IC19	G - 1
IC20	C - 2
Q1	J - 3
Q2	I - 3
Q3	I - 3
Q4	H - 3
Q5	H - 3
Q6	H - 3
Q7	G - 3
Q8	C - 3
Q9	C - 3
Q10	C - 3
Q11	B - 3
Q12	E - 1
TP1	J - 3
TP2	H - 3
TP3	G - 3
TP4	B - 3
TP5	F - 3
TP6	G - 1
TP7	G - 1
TPE1	A - 3
TPE2	D - 1
TPE3	F - 3
TPE4	J - 1
VR1	H - 1
VR2	F - 1

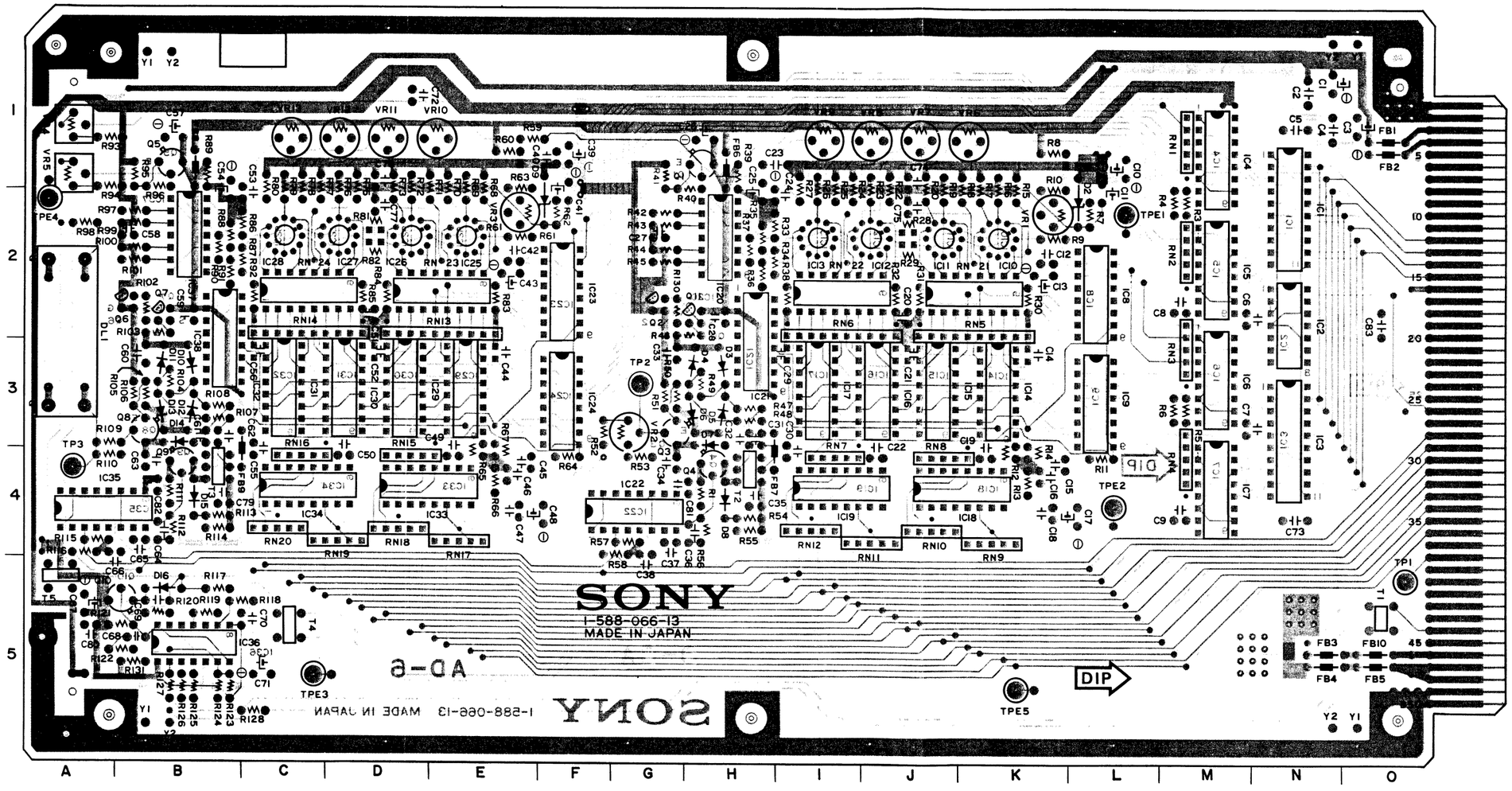
⑨ SS-12 BOARD: SYNC SEPARATOR



SS-12
BVT-500P
BVT-500S

⑧ AD-6 BOARD (1-558-066-13)

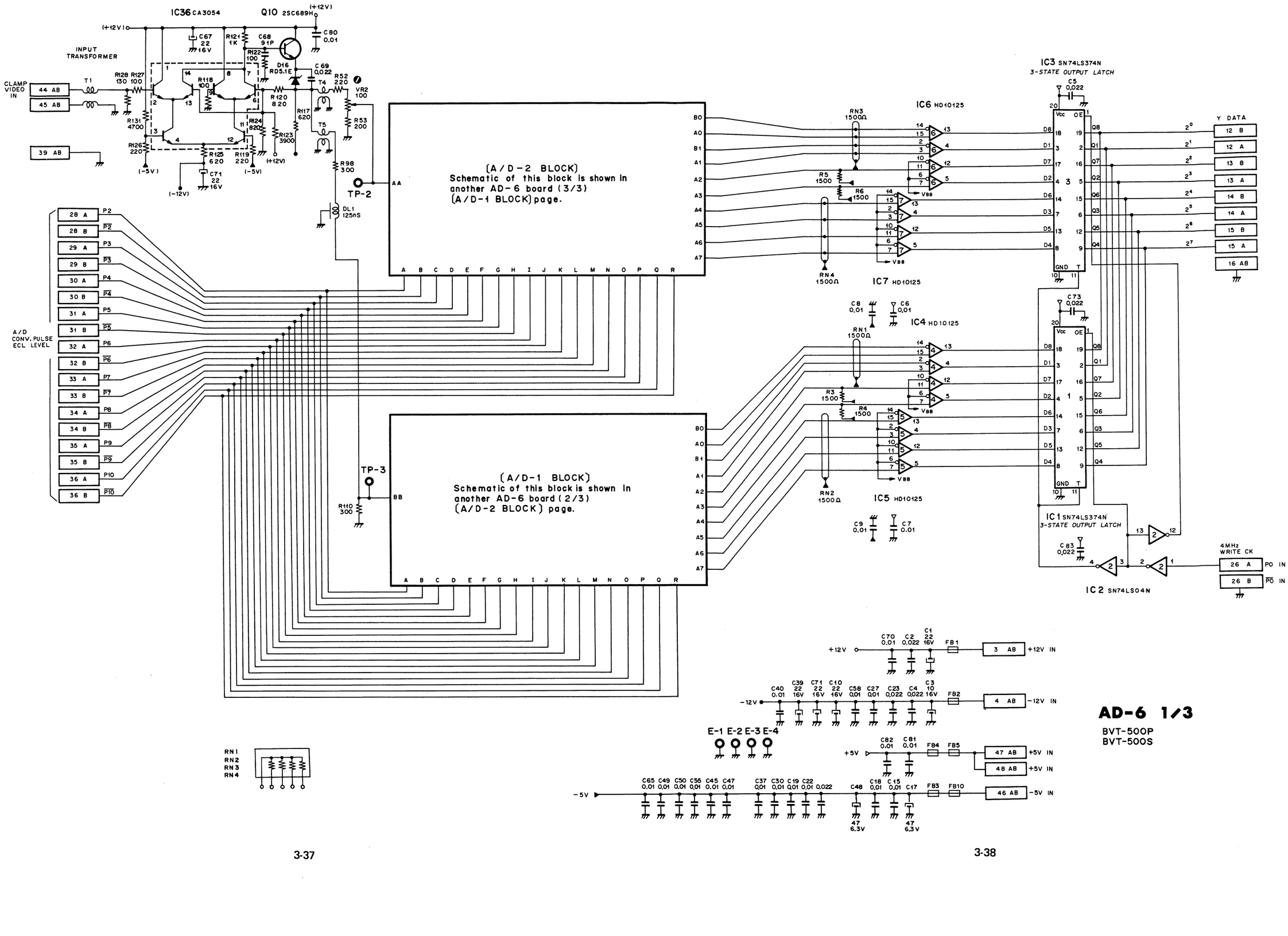
– COMPONENT SIDE –



BVT-500P
BVT-500S
AD-6 (1-588-066-13)

D2	L - 2	Q1	H - 1
D3	H - 3	Q2	G - 2
D4	H - 3	Q3	G - 3
D5	H - 3	Q4	H - 4
D6	H - 3	Q5	B - 1
D7	H - 3	Q6	B - 2
D8	H - 4	Q7	B - 2
D9	F - 2	Q8	B - 3
D10	B - 3	Q9	B - 4
D11	B - 3	Q10	B - 5
D12	B - 3	Q11	H - 2
D13	B - 3		
D14	B - 3	TP1	O - 5
D15	B - 4	TP2	G - 3
D16	B - 5	TP3	A - 4
DL1	A - 2	TPE1	L - 2
		TPE2	L - 4
IC1	N - 2	TPE3	C - 5
IC2	N - 2	TPE4	A - 2
IC3	N - 3	TPE5	K - 5
IC4	M - 1		
IC5	M - 2	VR1	K - 2
IC6	M - 3	VR2	G - 3
IC7	M - 4	VR3	E - 2
IC8	L - 2	VR4	A - 1
IC9	L - 3	VR5	A - 1
IC10	K - 2	VR6	K - 1
IC11	J - 2	VR7	J - 1
IC12	J - 2	VR8	J - 1
IC13	I - 2	VR9	I - 1
IC14	K - 3	VR10	E - 1
IC15	J - 3	VR11	D - 1
IC16	J - 3	VR12	D - 1
IC17	I - 3	VR13	C - 1
IC18	K - 4		
IC19	I - 4		
IC20	H - 2		
IC21	H - 3		
IC22	G - 4		
IC23	F - 2		
IC24	F - 3		
IC25	E - 2		
IC26	D - 2		
IC27	D - 2		
IC28	C - 2		
IC29	E - 3		
IC30	D - 3		
IC31	D - 3		
IC32	C - 3		
IC33	E - 4		
IC34	C - 4		
IC35	A - 4		
IC36	B - 5		
IC37	B - 2		
IC38	B - 3		

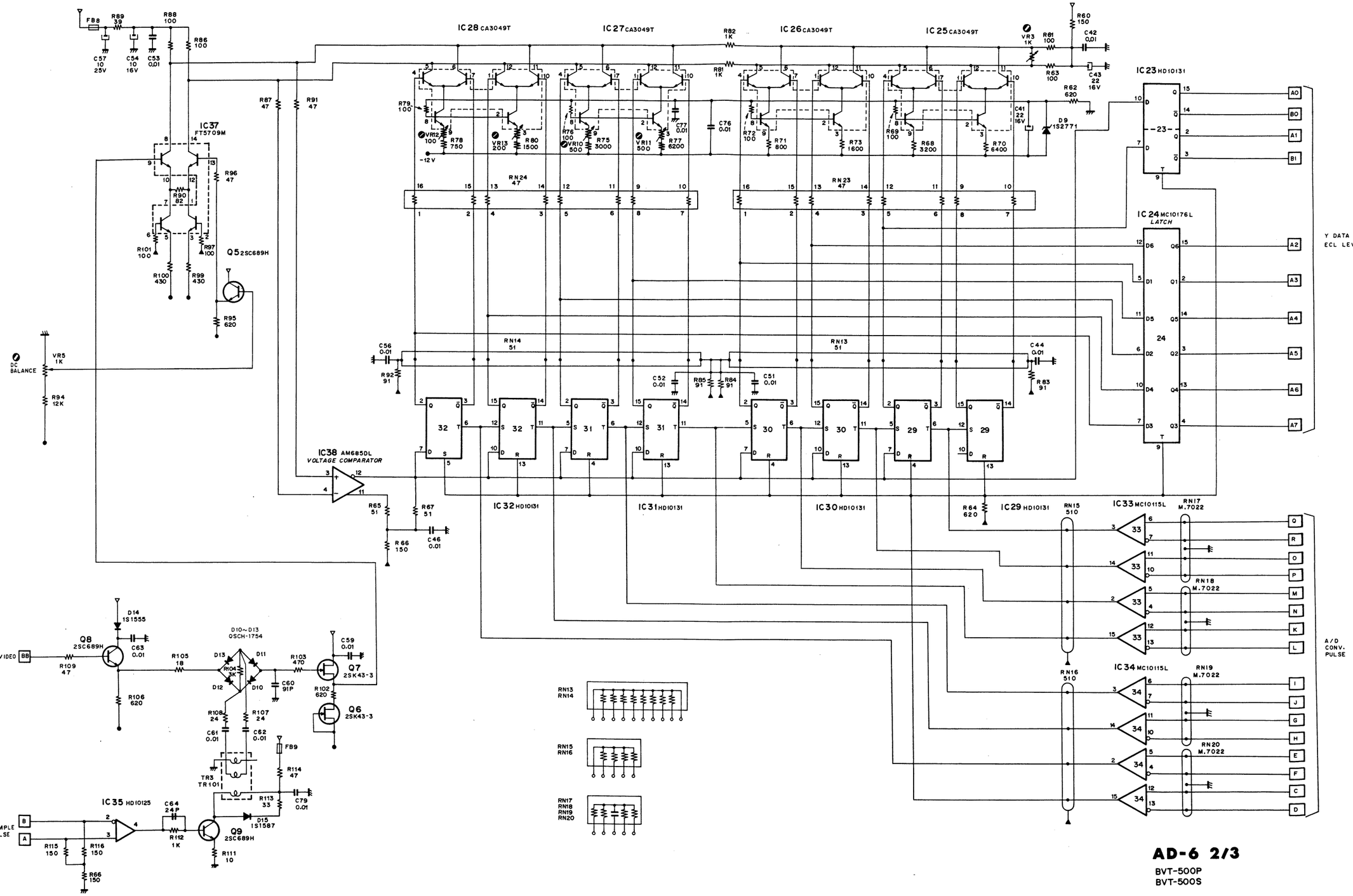
⑧ AD-6 BOARD (1/3) : Y A-D CONVERTER



AD-6 1/3

BVT-500P
BVT-500S

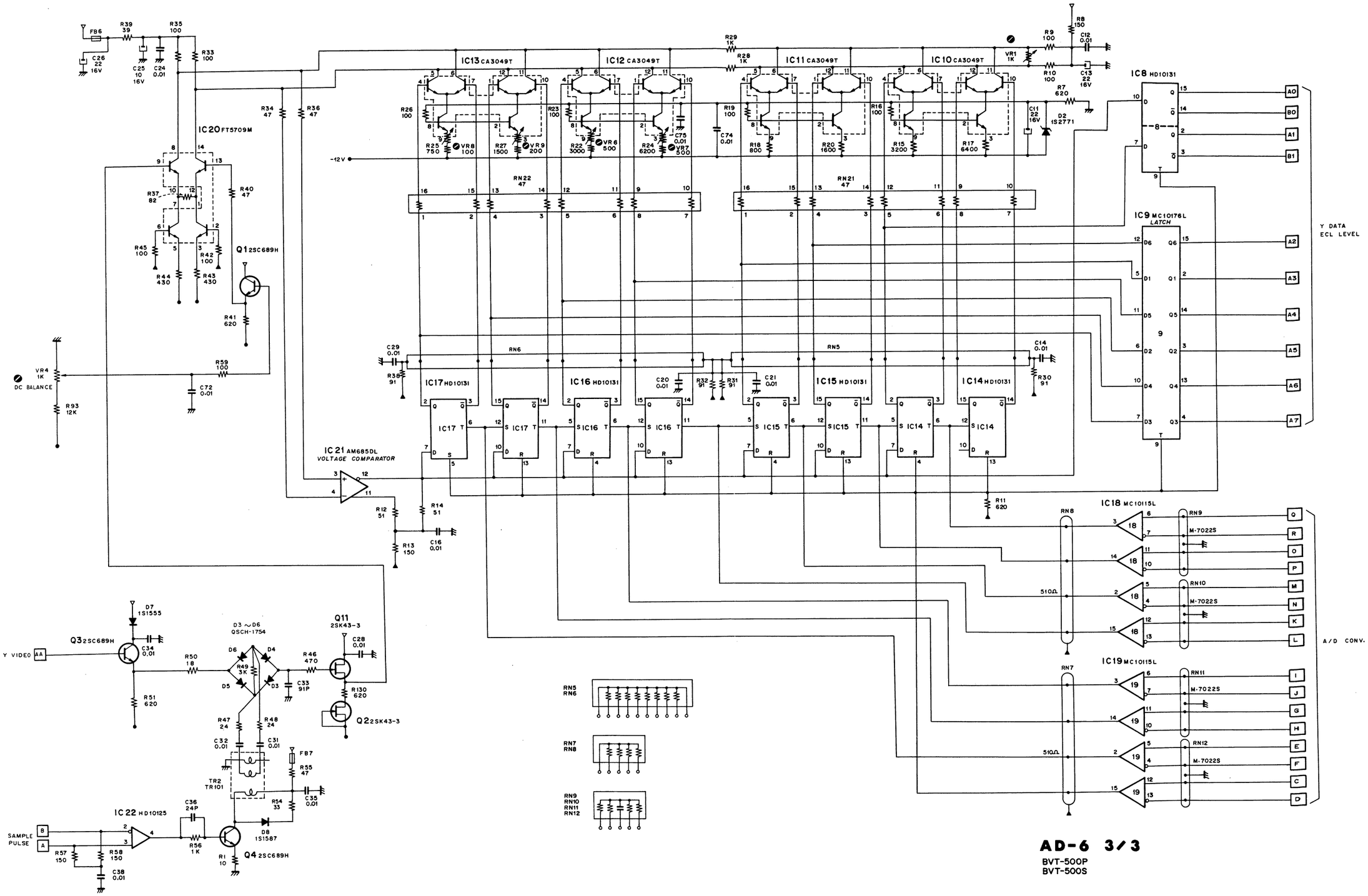
⑧ AD-6 BOARD (2/3) : Y A-D CONVERTER



AD-6 2/3

BVT-500P
BVT-500S

⑧ AD-6 BOARD (3/3) : Y A-D CONVERTER

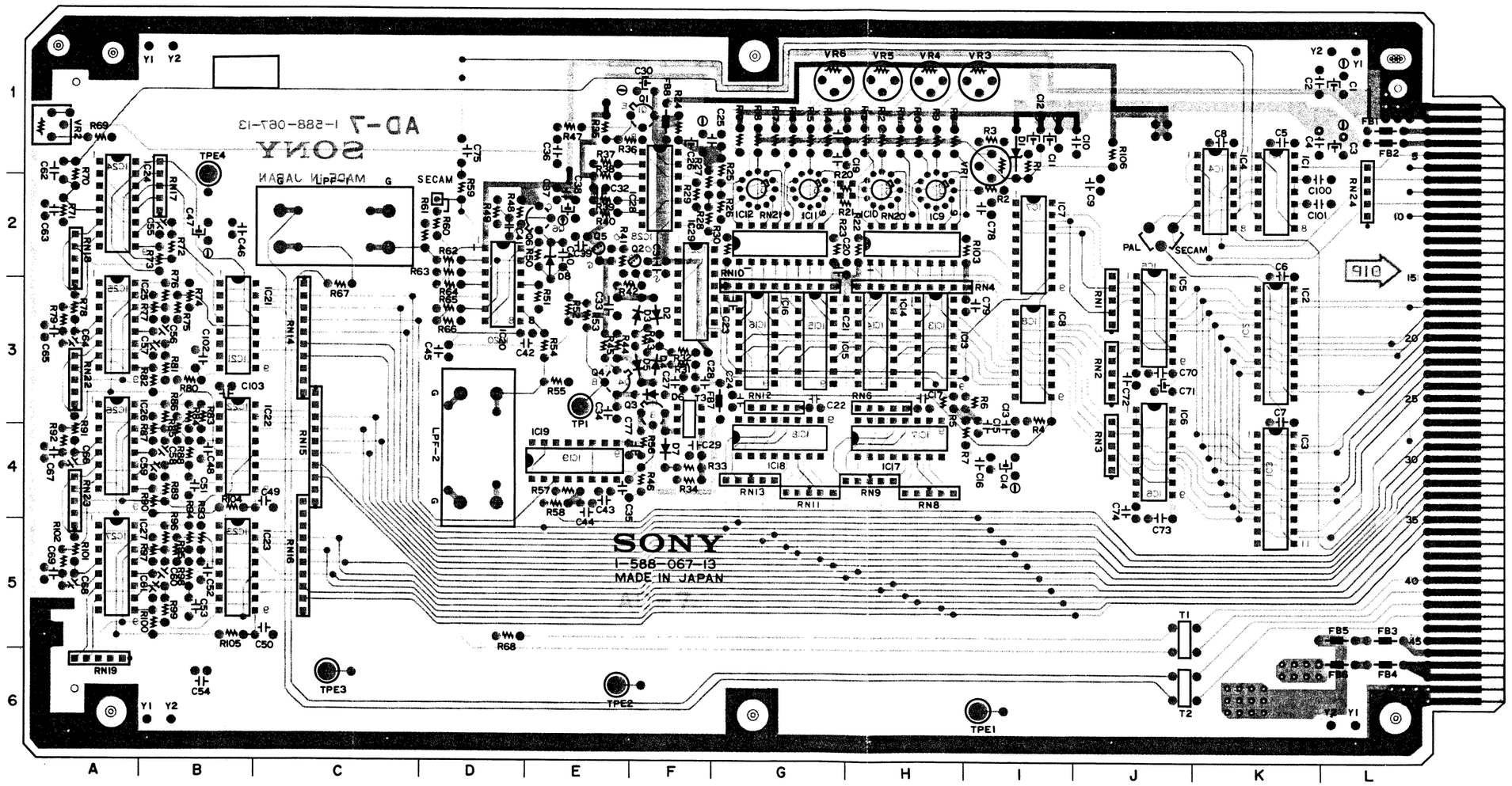


AD-6 3/3

BVT-500P
BVT-500S

⑦ AD-7 BOARD (1-588-067-13)

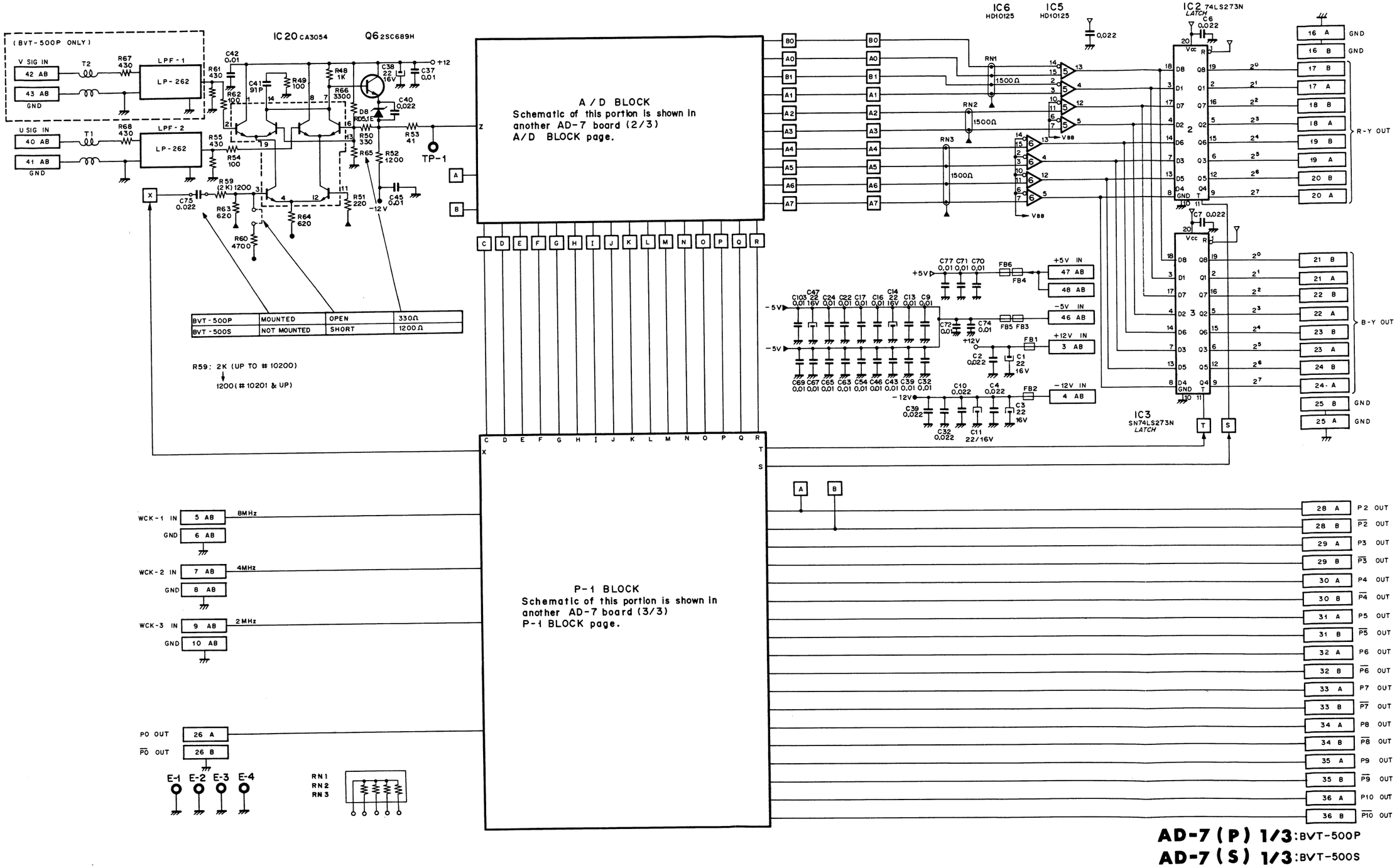
– COMPONENT SIDE –



BVT-500P
BVT-500S
AD-7 (1-588-067-13)

D1	I	1
D2	F	3
D3	F	3
D4	F	3
D5	F	3
D6	F	3
D7	F	4
D8	E	2
IC1	K	2
IC2	K	3
IC3	K	4
IC4	K	2
IC5	J	3
IC6	J	4
IC7	I	2
IC8	I	3
IC9	H	2
IC10	H	2
IC11	G	2
IC12	G	2
IC13	H	3
IC14	H	3
IC15	G	3
IC16	G	3
IC17	H	4
IC18	G	4
IC19	E	4
IC20	D	3
IC21	B	3
IC22	B	4
IC23	B	5
IC24	A	2
IC25	A	3
IC26	A	4
IC27	A	5
IC28	F	2
IC29	F	3
Q1	F	1
Q2	F	2
Q3	F	3
Q4	E	3
Q5	E	2
Q6	E	2
TP1	E	3
TPE1	I	6
TPE2	E	6
TPE3	C	6
TPE4	B	1
VR1	I	1
VR2	A	1
VR3	I	1
VR4	H	1
VR5	H	1
VR6	G	1

⑦ AD-7 (P)(S) BOARD (1/3) : CHROMA A-D CONVERTER



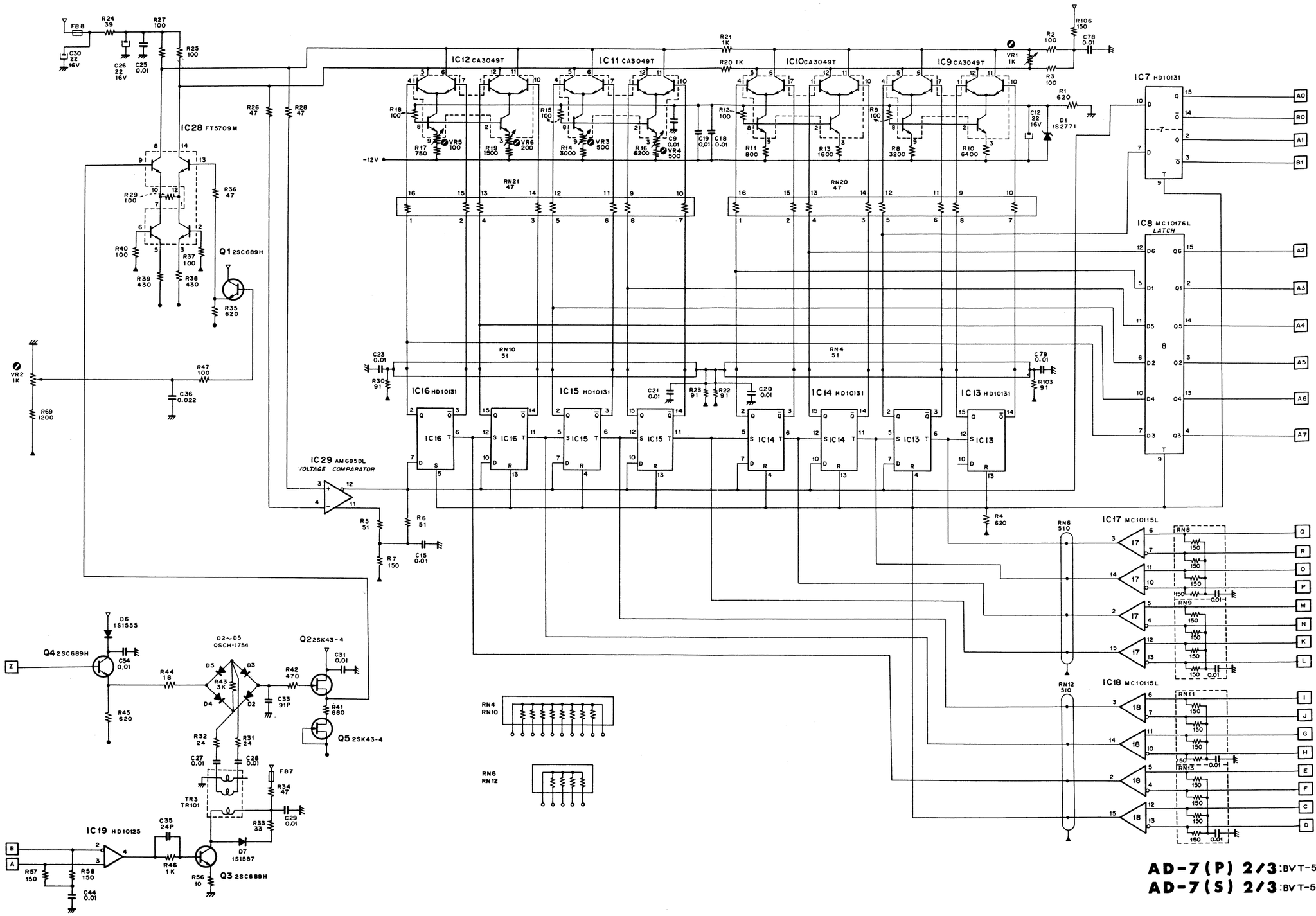
BVT-500P	MOUNTED	OPEN	330Ω
BVT-500S	NOT MOUNTED	SHORT	1200Ω

R59: 2K (UP TO # 10200)
↓
1200 (# 10201 & UP)

AD-7 (P) 1/3: BVT-500P
AD-7 (S) 1/3: BVT-500S

⑦ AD-7 (P)(S) BOARD (2/3) : CHROMA A-D CONVERTER

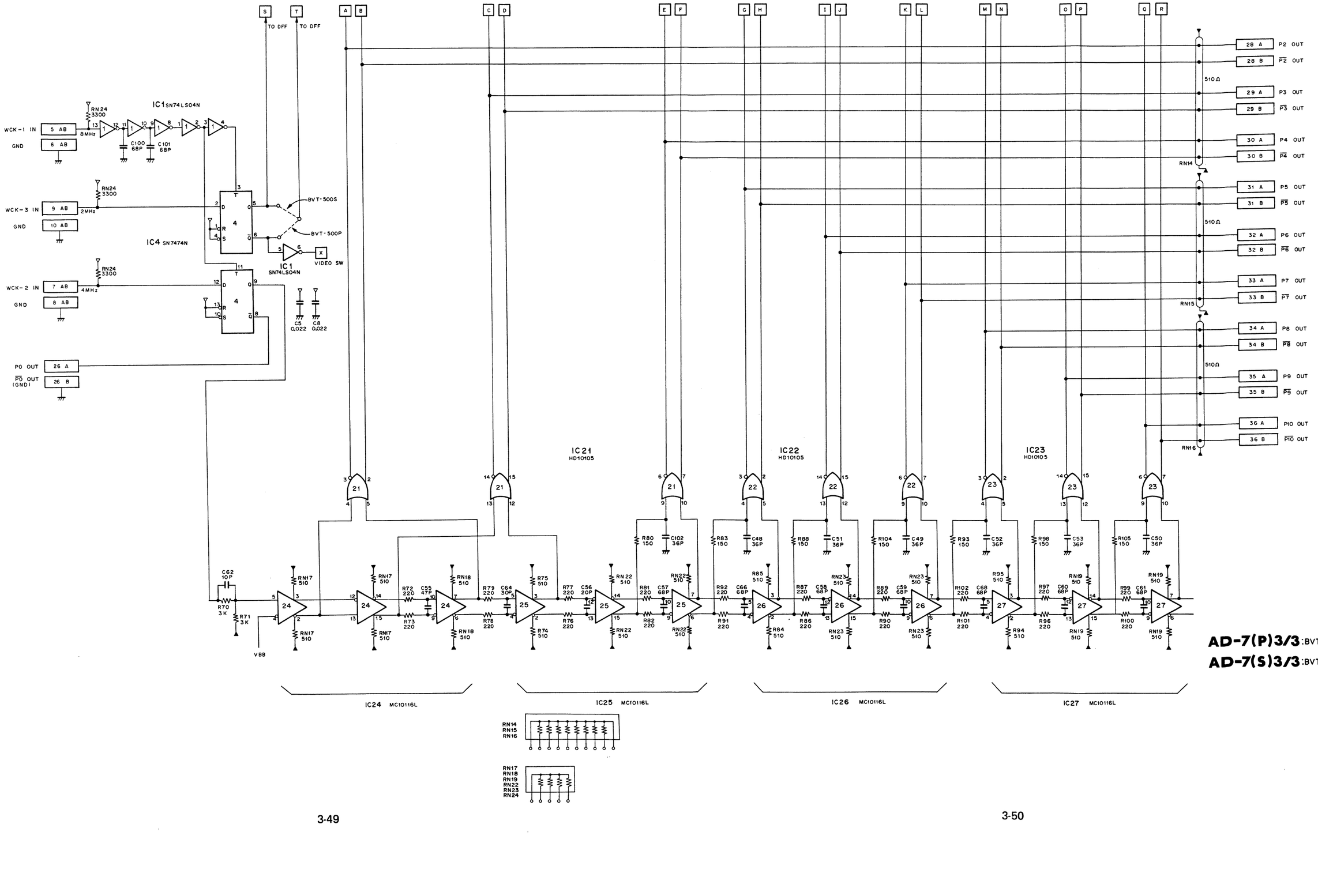
A-D Block



AD-7 (P) 2/3 : BVT-500P
AD-7 (S) 2/3 : BVT-500S

⑦ AD-7 (P)(S) BOARD (3/3) : CHROMA A-D CONVERTER

P-1 Block

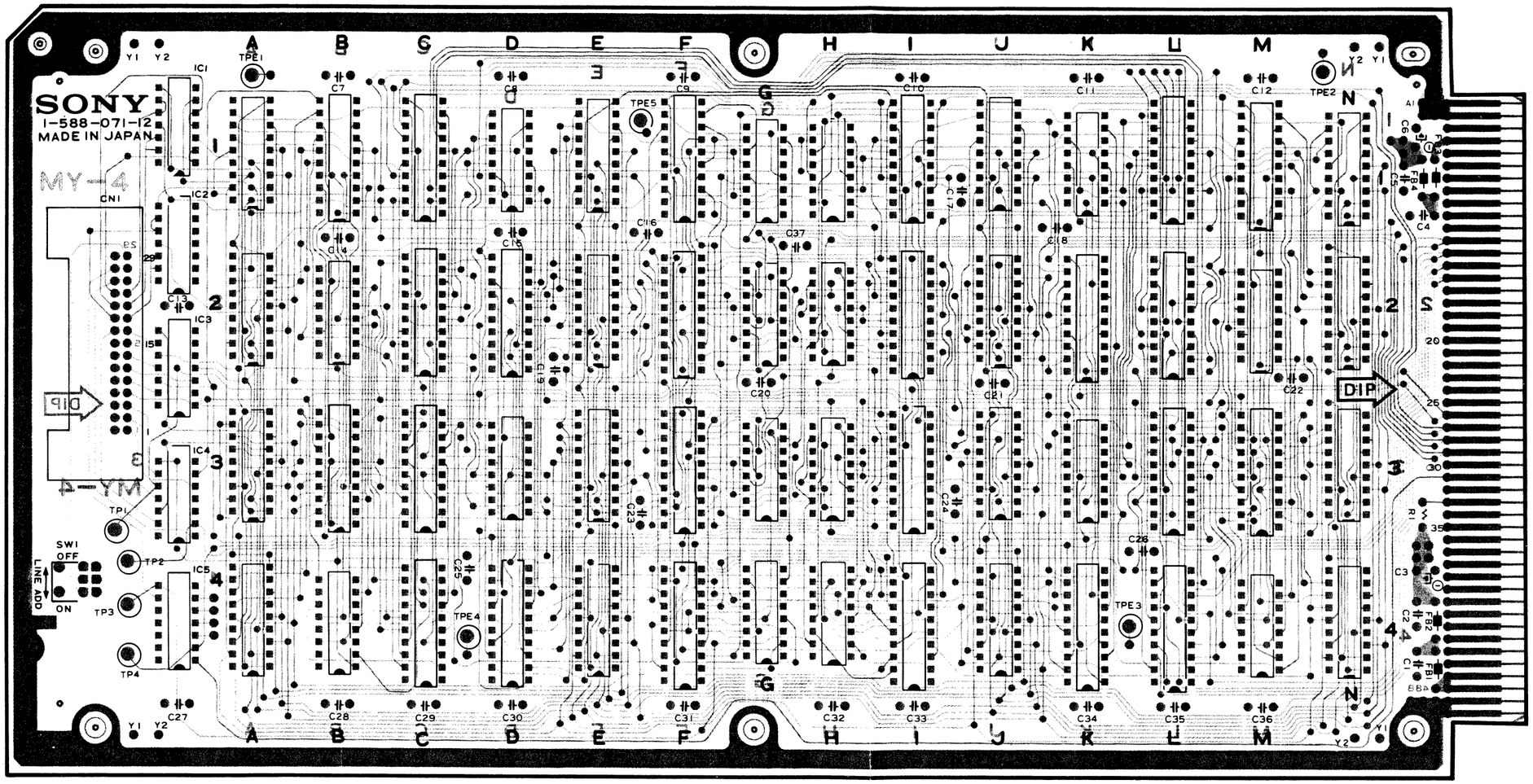


AD-7(P)3/3:BVT-500(P

AD-7(S)3/3:BVT-500(S

⑥ MY-4 BOARD (1-588-071-12)

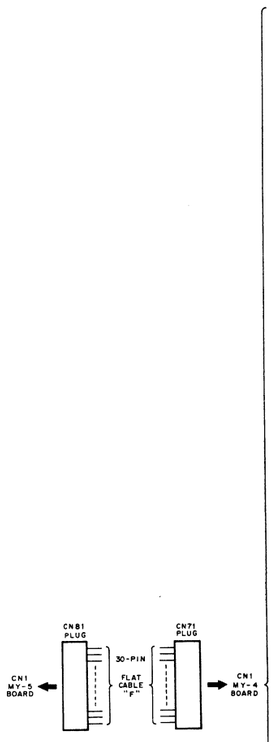
– COMPONENT SIDE –

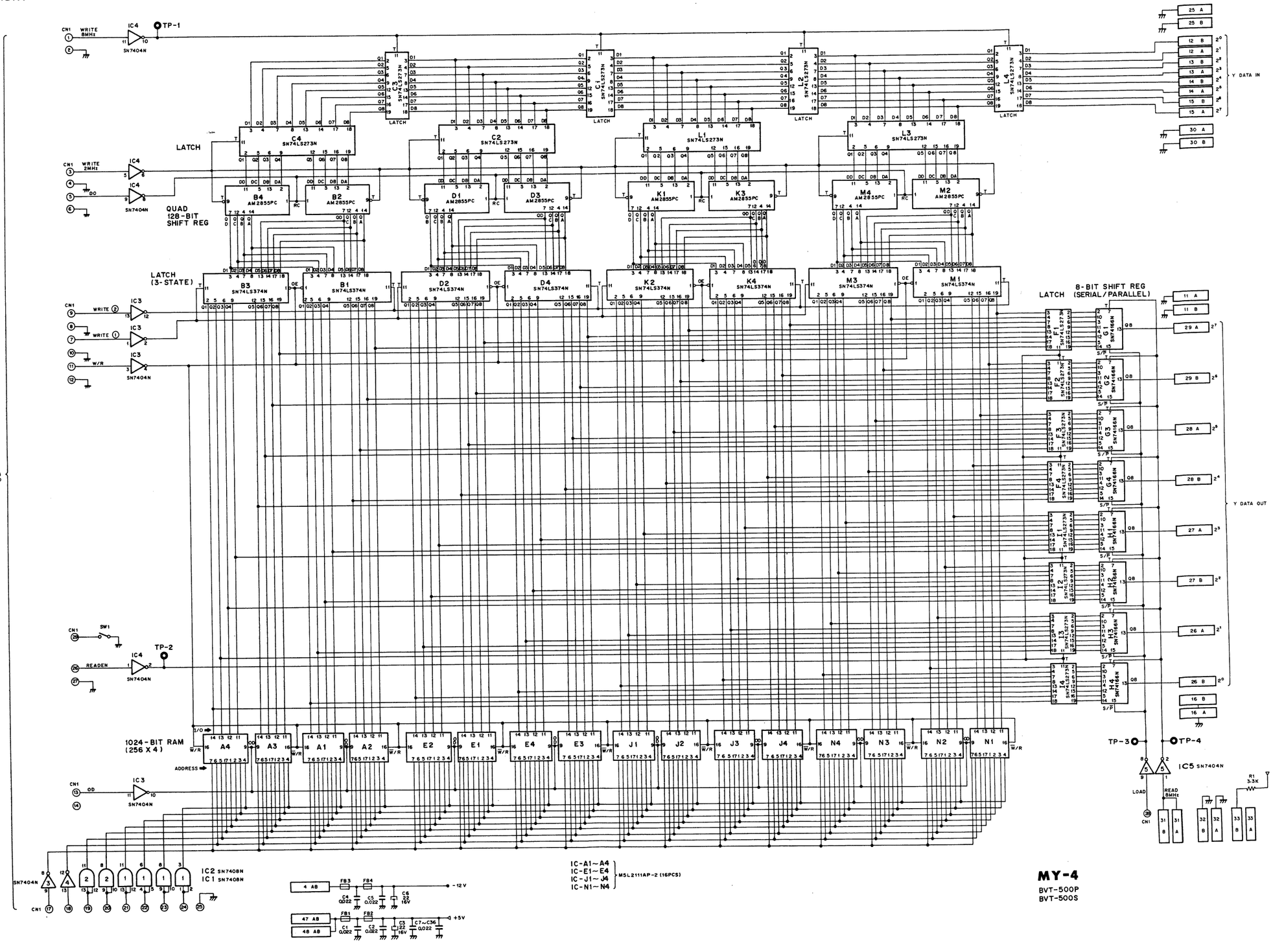


BVT-500P
BVT-500S
MY-4 (1-588-071-12)

IC1	A - 1	SW1	A - 4
IC2	A - 2		
IC3	A - 2	TP1	A - 3
IC4	A - 3	TP2	A - 4
IC5	A - 4	TP3	A - 4
IC-A1		TP4	A - 4
IC-A2			
IC-A3		TPE1	A - 1
IC-A4		TPE2	N - 1
IC-B1		TPE3	K - 4
IC-B2		TPE4	C - 4
IC-B3		TPE5	F - 1
IC-B4			
IC-C1			
IC-C2			
IC-C3			
IC-C4			
IC-D1			
IC-D2			
IC-D3			
IC-D4			
IC-E1			
IC-E2			
IC-E3			
IC-E4			
IC-F1			
IC-F2			
IC-F3			
IC-F4			
IC-G1			
IC-G2			
IC-G3			
IC-G4			
IC-H1			
IC-H2			
IC-H3			
IC-H4			
IC-I1			
IC-I2			
IC-I3			
IC-I4			
IC-J1			
IC-J2			
IC-J3			
IC-J4			
IC-K1			
IC-K2			
IC-K3			
IC-K4			
IC-L1			
IC-L2			
IC-L3			
IC-L4			
IC-M1			
IC-M2			
IC-M3			
IC-M4			
IC-N1			
IC-N2			
IC-N3			
IC-N4			

⑥ MY-4 BOARD: Y 4-LINE MEMORY

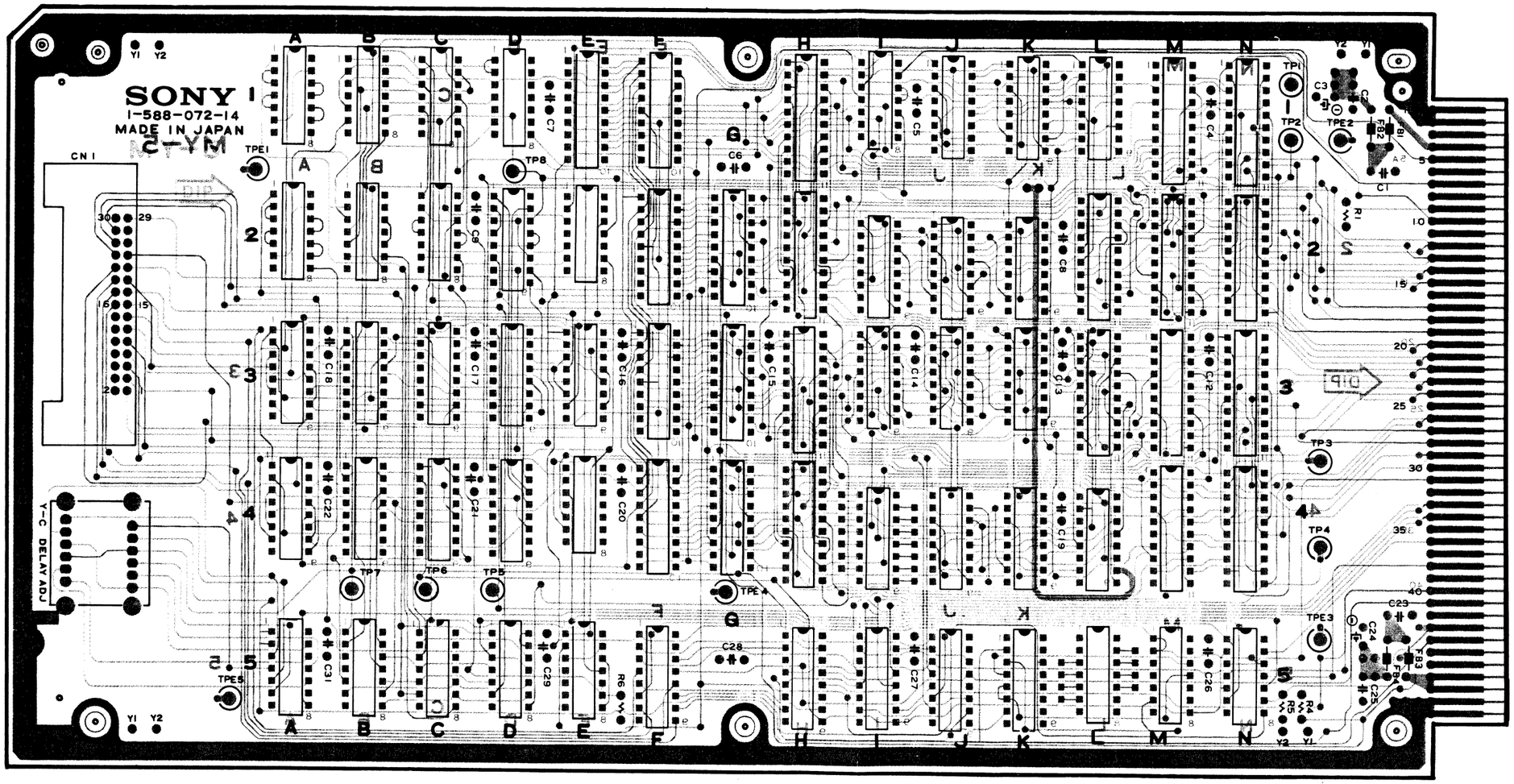




MY-4
BVT-500P
BVT-500S

⑤ MY-5 BOARD (1-588-072-14)

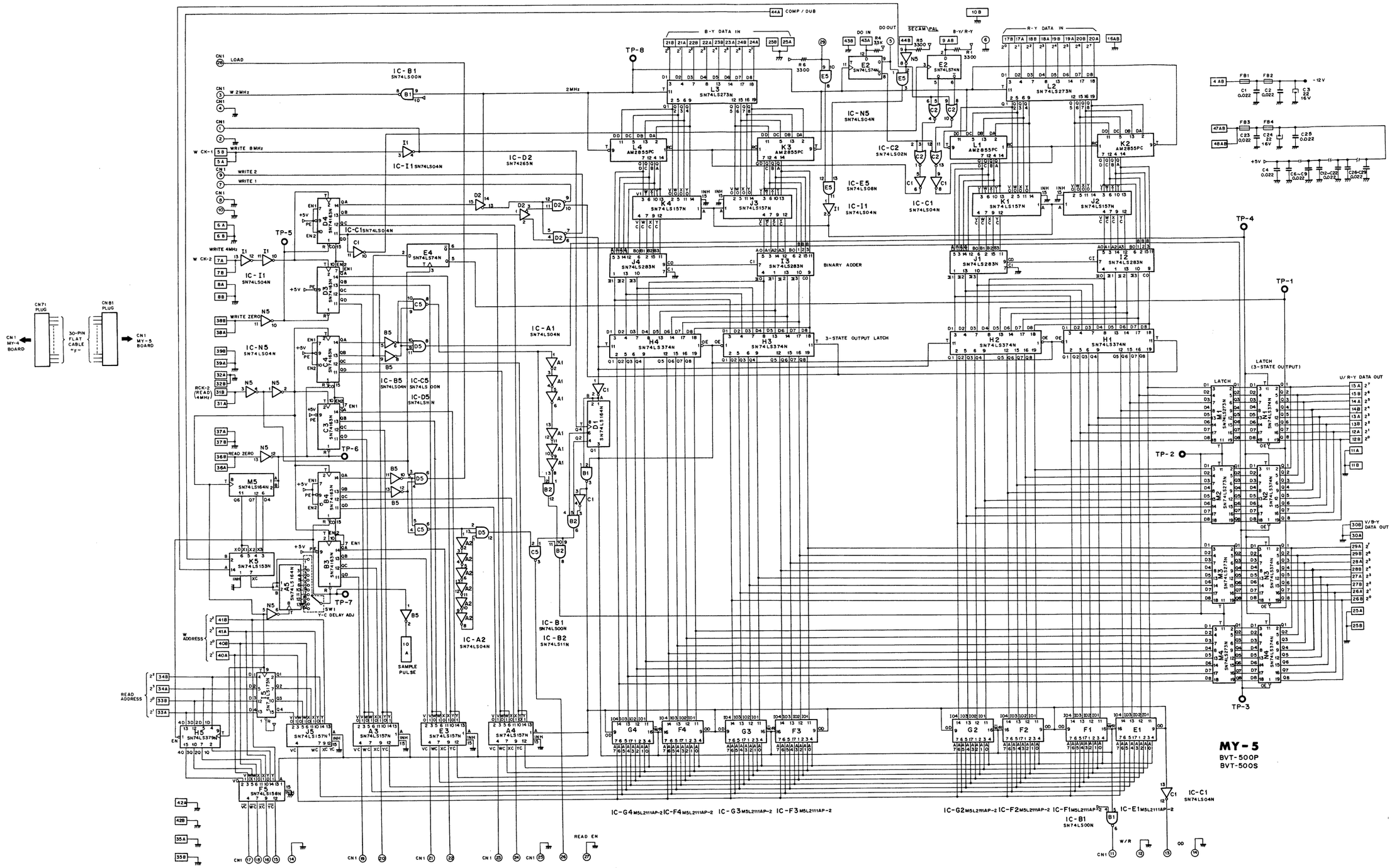
– COMPONENT SIDE –



BVT-500P
BVT-500S
MY-5 (1-588-072-14)

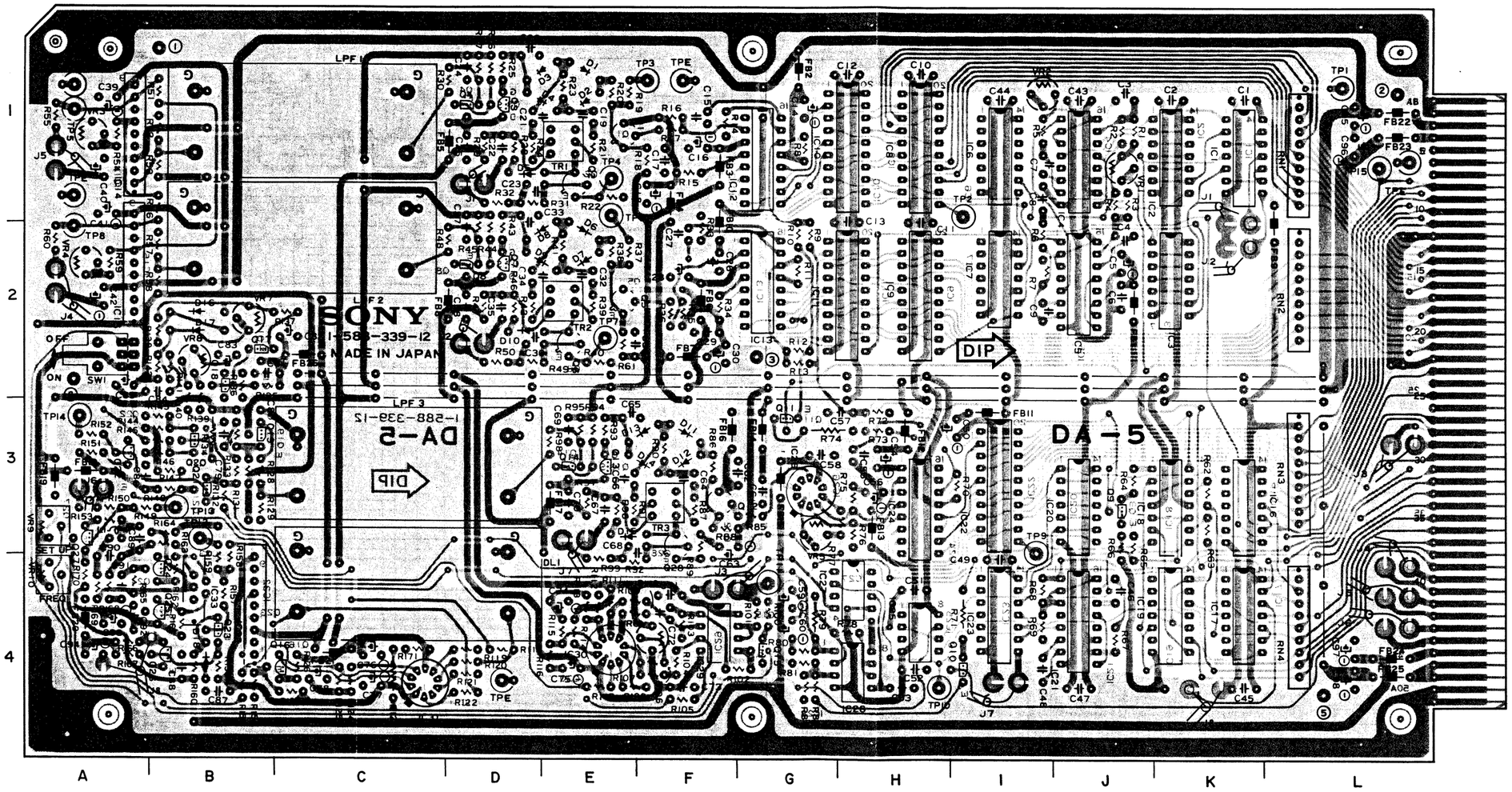
IC-A1	SW1	A - 4
IC-A2		
IC-A3	TP1	N - 1
IC-A4	TP2	N - 1
IC-A5	TP3	N - 3
IC-B1	TP4	N - 4
IC-B2	TP5	D - 4
IC-B3	TP6	C - 4
IC-B4	TP7	B - 4
IC-B5	TP8	D - 1
IC-C1		
IC-C2	TPE1	A - 1
IC-C3	TPE2	N - 1
IC-C4	TPE3	N - 5
IC-C5	TPE4	G - 4
IC-D1	TPE5	A - 5
IC-D2		
IC-D3		
IC-D4		
IC-D5		
IC-E1		
IC-E2		
IC-E3		
IC-E4		
IC-E5		
IC-F1		
IC-F2		
IC-F3		
IC-F4		
IC-F5		
IC-G2		
IC-G3		
IC-G4		
IC-H1		
IC-H2		
IC-H3		
IC-H4		
IC-H5		
IC-I1		
IC-I2		
IC-I3		
IC-I5		
IC-J1		
IC-J2		
IC-J3		
IC-J4		
IC-J5		
IC-K1		
IC-K2		
IC-K3		
IC-K4		
IC-K5		
IC-L1		
IC-L2		
IC-L3		
IC-L4		
IC-M1		
IC-M2		
IC-M3		
IC-M4		
IC-M5		
IC-N1		
IC-N2		
IC-N3		
IC-N4		
IC-N5		

⑤ MY-5 BOARD: CHROMA 4-LINE MEMORY



④ DA-5 BOARD (1-588-339-12)

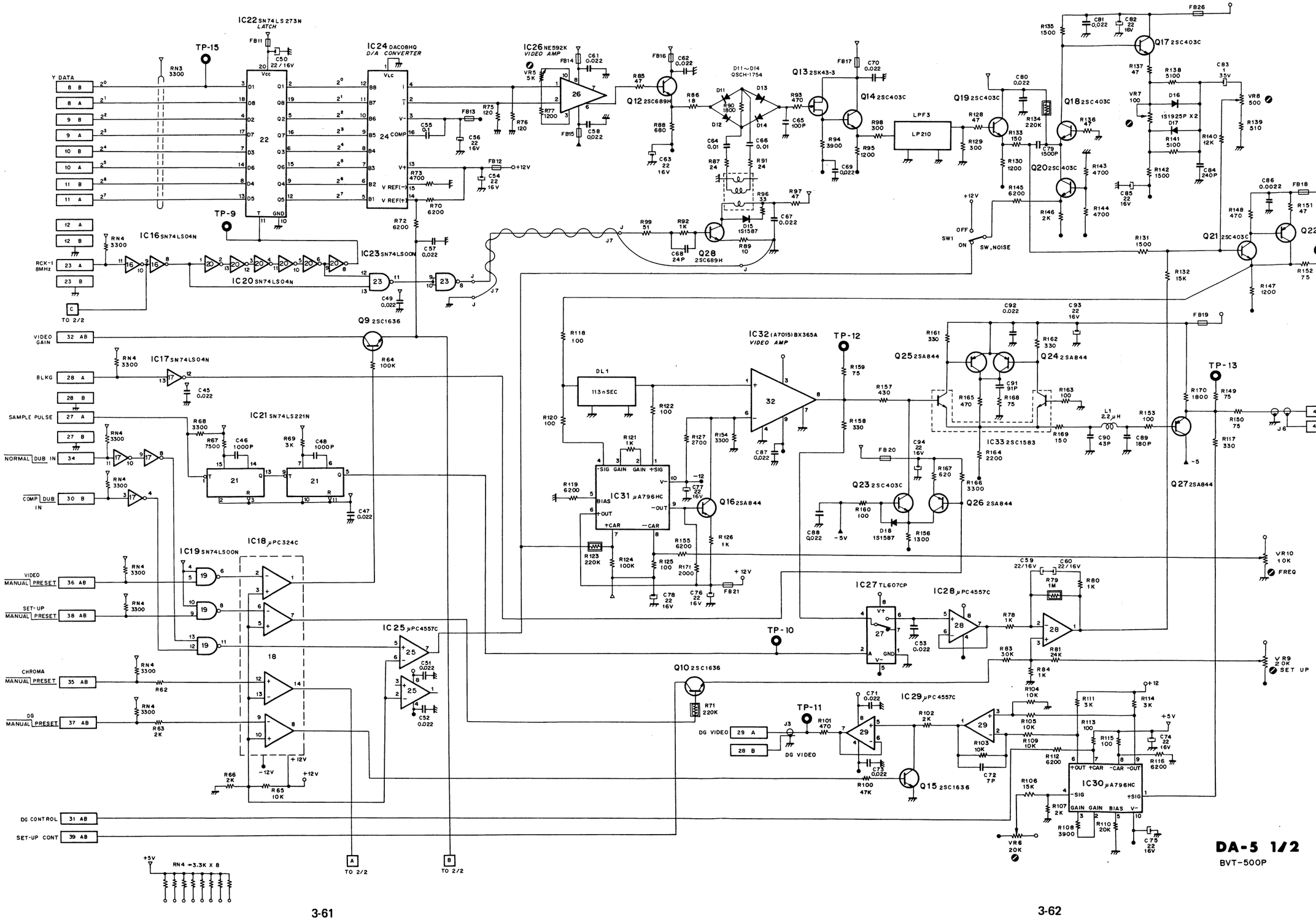
– COMPONENT SIDE –



BVT-500P
DA-5 (1-588-339-12)

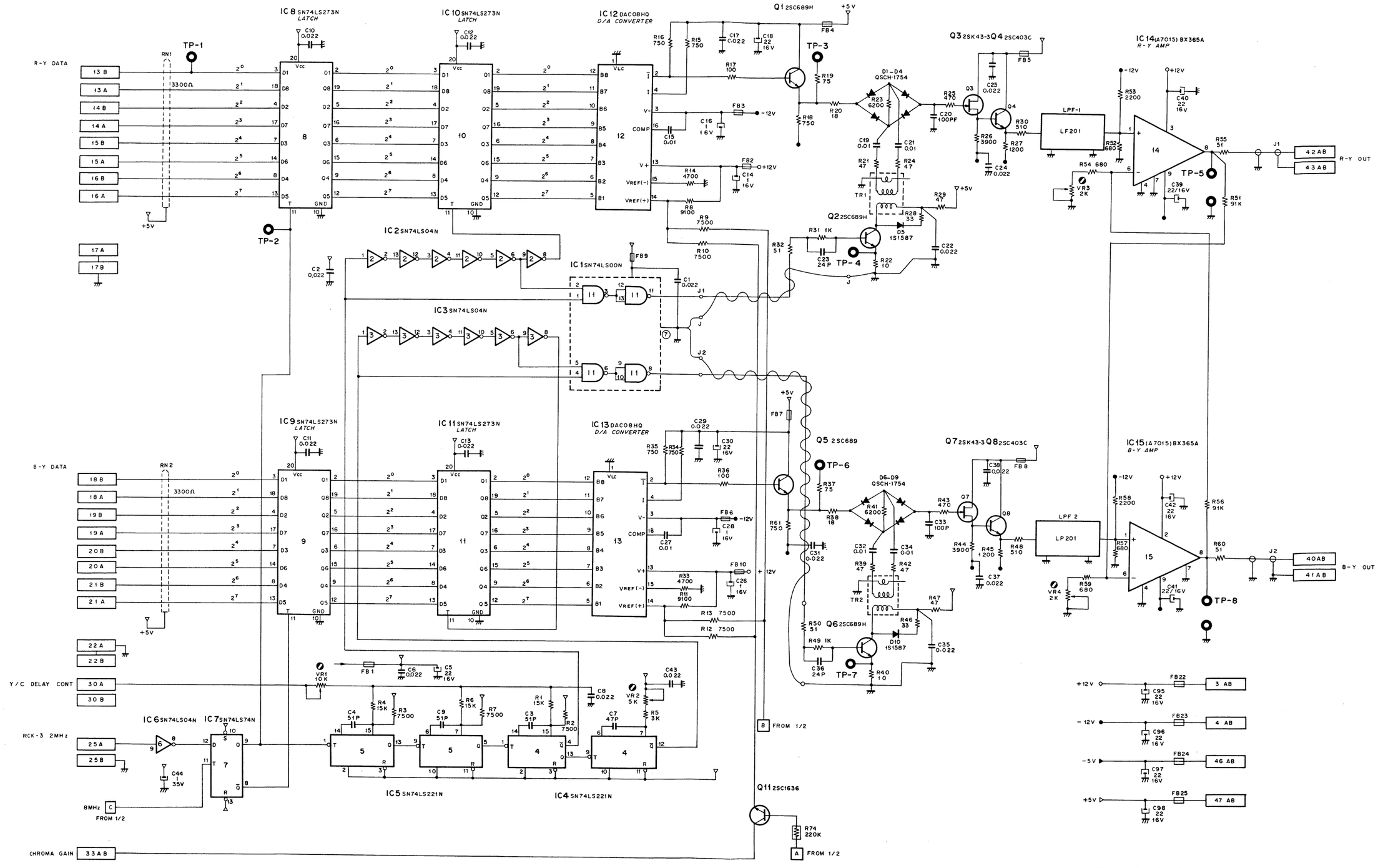
D1	E - 1	Q12	F - 3		
D2	E - 1	Q13	E - 3		
D3	E - 1	Q14	E - 3		
D4	E - 1	Q15	G - 4		
D5	D - 1	Q16	C - 4		
D6	E - 2	Q17	B - 2		
D7	E - 2	Q18	B - 2		
D8	E - 2	Q19	B - 3		
D9	E - 2	Q20	B - 3		
D10	D - 2	Q21	B - 3		
D11	F - 3	Q22	A - 3		
D12	F - 3	Q23	B - 4		
D13	F - 3	Q24	B - 4		
D14	F - 3	Q25	B - 4		
D15	E - 3	Q26	B - 4		
D16	B - 2	Q27	A - 3		
D17	B - 2	Q28	F - 3		
D18	B - 4				
		SW1	A - 2		
DL1	C - 4				
		TP1	L - 1		
IC1	K - 1	TP2	I - 1		
IC2	K - 1	TP3	F - 1		
IC3	K - 2	TP4	E - 1		
IC4	J - 1	TP5	A - 1		
IC5	J - 2	TP6	E - 1		
IC6	I - 1	TP7	E - 2		
IC7	I - 2	TP8	A - 2		
IC8	H - 1	TP9	I - 3		
IC9	H - 2	TP10	H - 4		
IC10	H - 1	TP11	G - 4		
IC11	H - 2	TP12	B - 3		
IC12	G - 1	TP13	B - 3		
IC13	G - 2	TP14	A - 3		
IC14	A - 1	TP15	L - 1		
IC15	A - 2				
IC16	K - 3	TPE1	A - 1		
IC17	K - 4	TPE2	A - 1		
IC18	K - 3	TPE3	D - 4		
IC19	K - 4	TPE4	F - 1		
IC20	J - 3	TPE5	L - 1		
IC21	J - 4				
IC22	I - 3	VR1	J - 1		
IC23	I - 4	VR2	I - 1		
IC24	H - 3	VR3	A - 1		
IC25	H - 4	VR4	A - 2		
IC26	G - 3	VR5	G - 3		
IC27	H - 4	VR6	F - 4		
IC28	H - 4	VR7	B - 2		
IC29	F - 4	VR8	B - 2		
IC30	E - 4	VR9	A - 3		
IC31	C - 4	VR10	A - 4		
IC32	B - 4				
IC33	B - 4				
Q1	E - 1				
Q2	E - 1				
Q3	D - 1				
Q4	D - 1				
Q5	E - 2				
Q6	E - 2				
Q7	D - 2				
Q8	D - 2				
Q9	J - 3				
Q10	I - 4				
Q11	G - 3				

④ DA-5 BOARD (1/2) : D-A CONVERTER



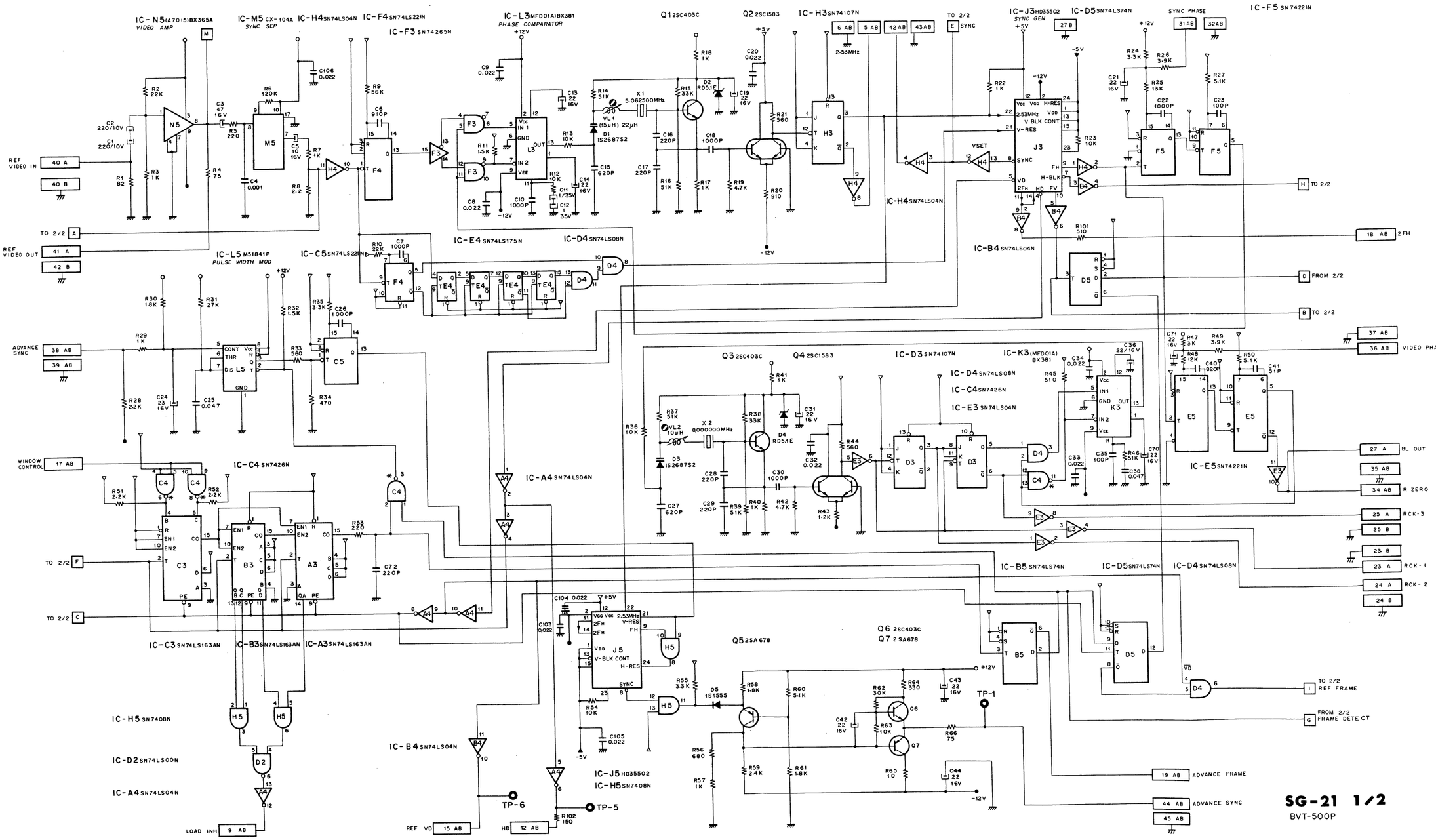
DA-5 1/2
BVT-500P

④ DA-5 BOARD (2/2) : D-A CONVERTER



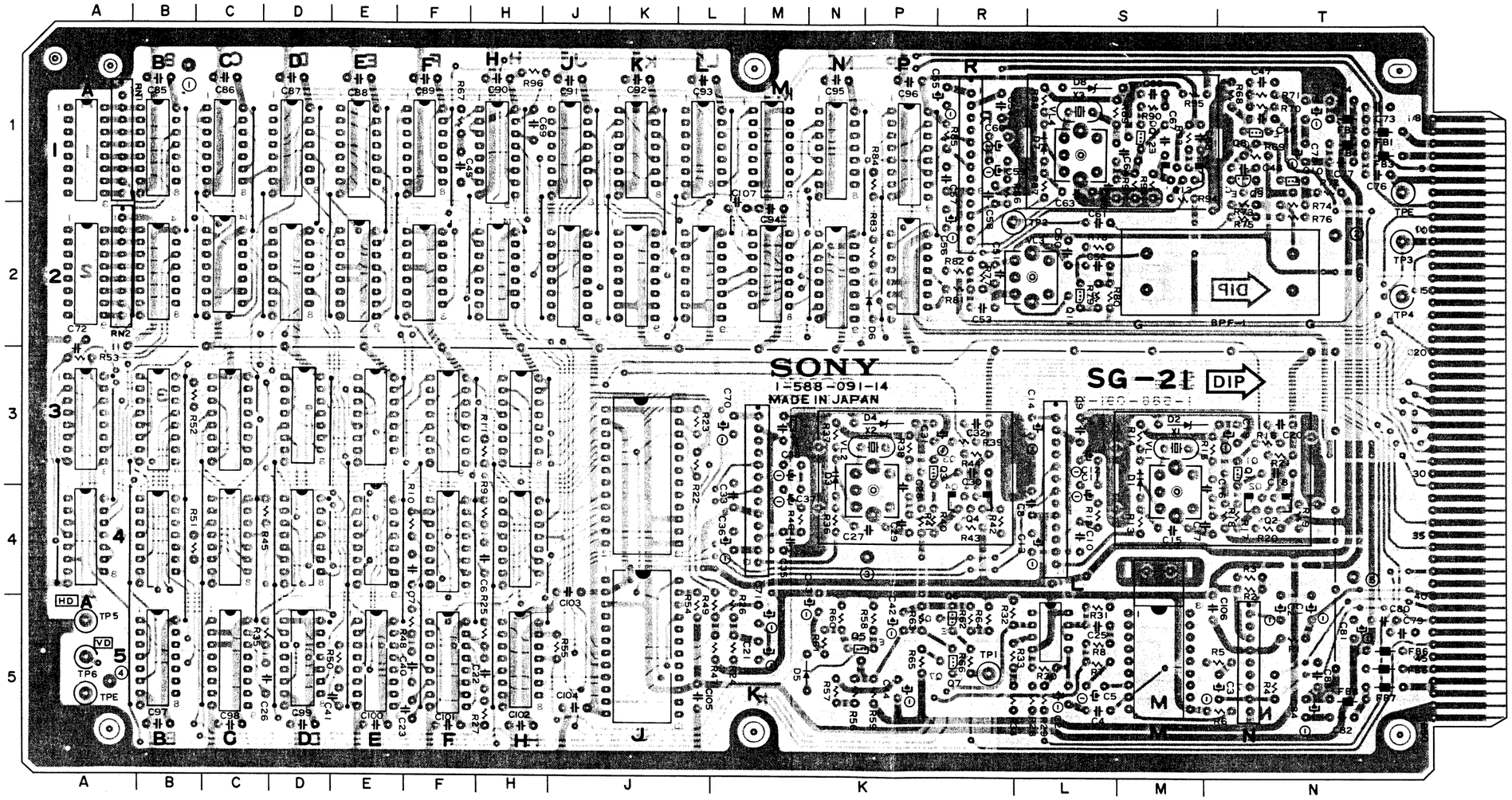
DA-5 2/2
BVT-500P

③ SG-21 BOARD (1/2) : SYNC GENERATOR



③ SG-21 BOARD (1-588-091-14)

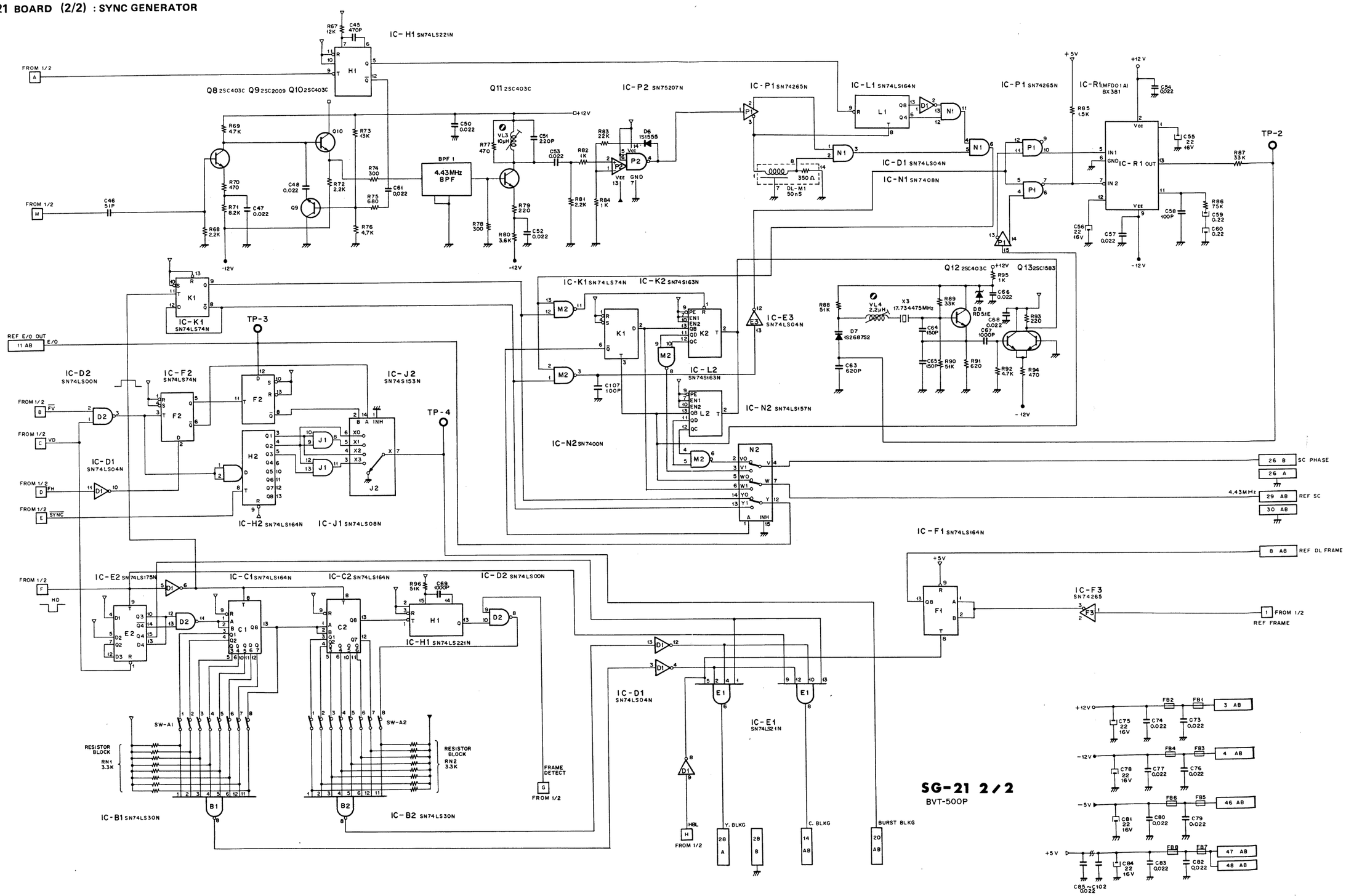
– COMPONENT SIDE –



BVT-500P
SG-21 (1-588-091-12, -13, or -14)

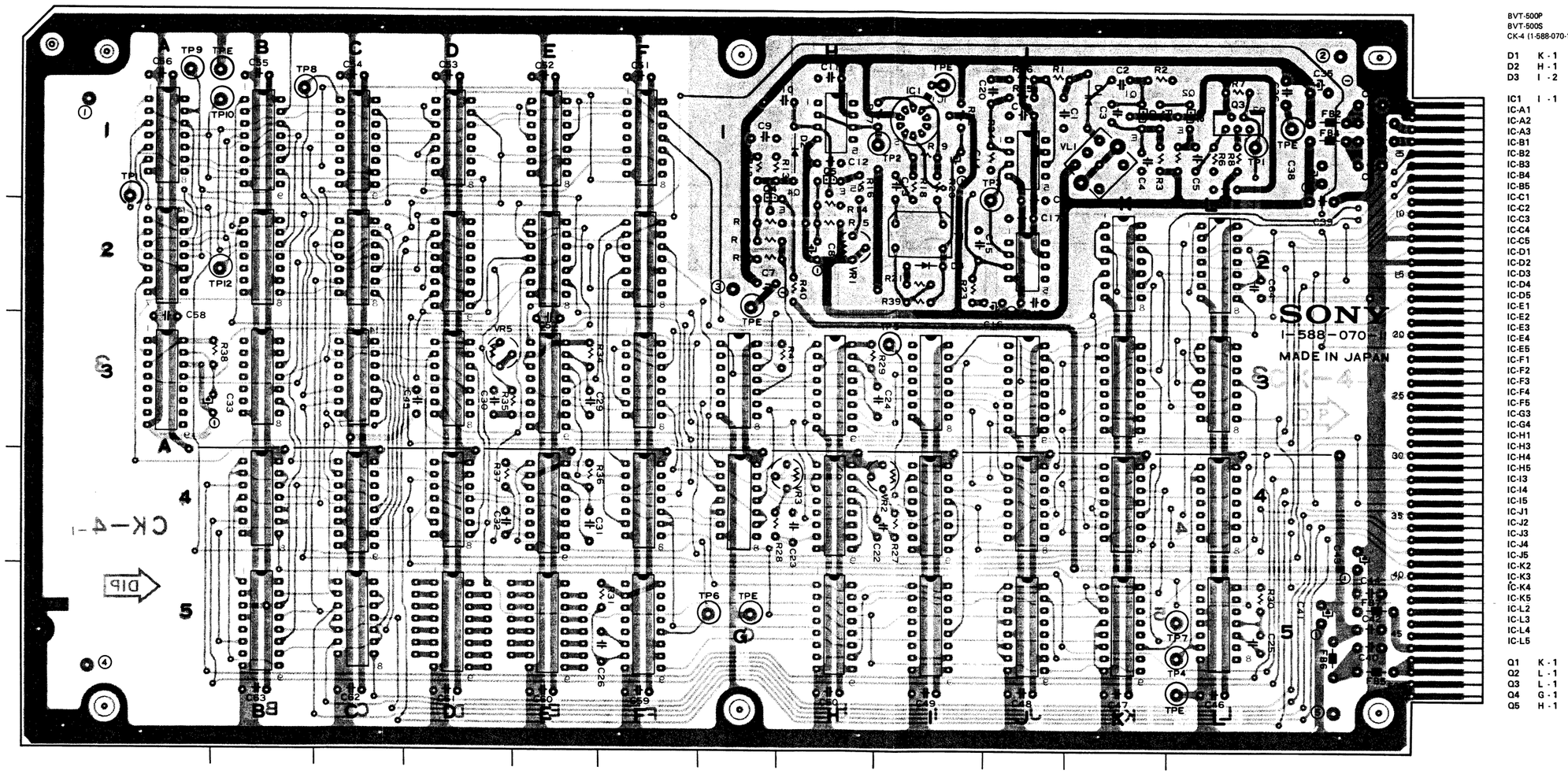
D1	M-3	Q1	N-3
D2	M-3	Q2	N-4
D3	K-3	Q3	K-3
D4	K-3	Q4	K-4
D5	K-5	Q5	K-5
D6	N-2	Q6	K-5
D7	S-1	Q7	K-5
D8	S-1	Q8	T-1
		Q9	T-1
DL-M1		Q10	T-1
		Q11	S-2
IC-A3		Q12	S-1
IC-A4		Q13	S-1
IC-B1			
IC-B2		SW-A1	
IC-B3		SW-A2	
IC-B4			
IC-B5		TP1	K-5
IC-C1		TP2	R-2
IC-C2		TP3	T-2
IC-C3		TP4	T-2
IC-C4		TP5	A-5
IC-C5		TP6	A-5
IC-D1			
IC-D2		TPE1	A-5
IC-D3		TPE2	T-1
IC-D4			
IC-D5		VL1	M-3
IC-E1		VL2	K-3
IC-E2		VL3	S-2
IC-E3		VL4	S-1
IC-E4			
IC-E5			
IC-F1			
IC-F2			
IC-F3			
IC-F4			
IC-F5			
IC-H1			
IC-H2			
IC-H3			
IC-H4			
IC-H5			
IC-J1			
IC-J2			
IC-J3			
IC-J5			
IC-K1			
IC-K2			
IC-K3			
IC-L1			
IC-L2			
IC-L3			
IC-L5			
IC-M2			
IC-M5			
IC-N1			
IC-N2			
IC-N5			
IC-P1			
IC-P2			
IC-R1			

③ SG-21 BOARD (2/2) : SYNC GENERATOR



② CK-4 BOARD (1-588-070-11)

– COMPONENT SIDE –

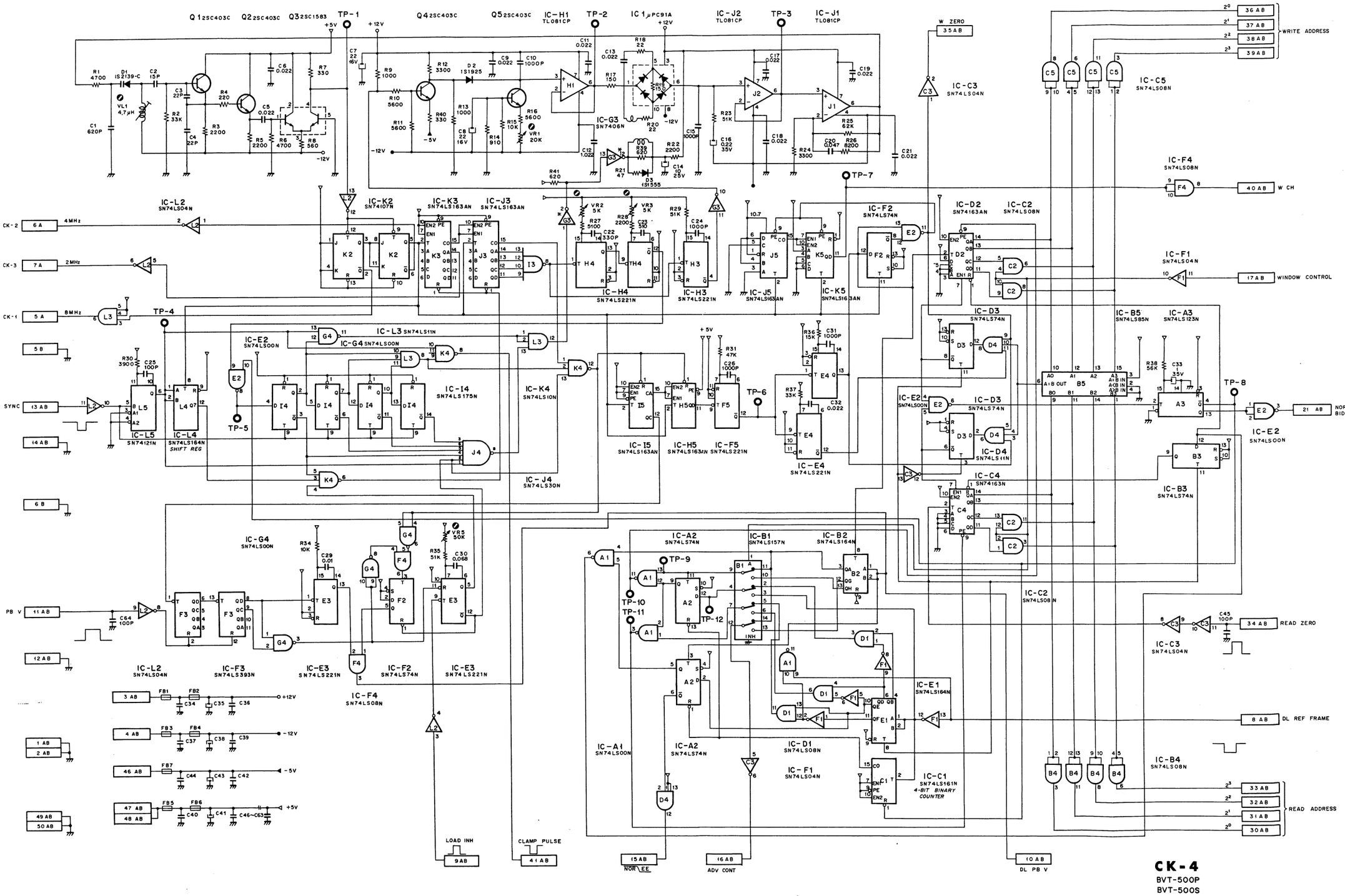


BVT-500P
BVT-500S
CK-4 (1-588-070-11)

D1	K - 1	TP1	L - 1
D2	H - 1	TP2	I - 1
D3	I - 2	TP3	J - 1
		TP4	L - 5
IC1	I - 1	TP5	I - 3
IC-A1		TP6	G - 5
IC-A2		TP7	L - 5
IC-A3		TP8	B - 1
IC-B1		TP9	A - 1
IC-B2		TP10	B - 1
IC-B3		TP11	A - 1
IC-B4		TP12	B - 2
IC-B5			
IC-C1		TPE1	B - 1
IC-C2		TPE2	G - 2
IC-C3		TPE3	G - 5
IC-C4		TPE4	I - 1
IC-C5		TPE5	L - 1
IC-D1		TPE6	L - 5
IC-D2			
IC-D3		VL1	K - 1
IC-D4			
IC-D5		VR1	H - 2
IC-E1		VR2	I - 4
IC-E2		VR3	H - 4
IC-E3		VR5	D - 3
IC-E4			
IC-E5			
IC-F1			
IC-F2			
IC-F3			
IC-F4			
IC-F5			
IC-G3			
IC-G4			
IC-H1			
IC-H3			
IC-H4			
IC-H5			
IC-I3			
IC-I4			
IC-I5			
IC-J1			
IC-J2			
IC-J3			
IC-J4			
IC-J5			
IC-K2			
IC-K3			
IC-K4			
IC-K5			
IC-L2			
IC-L3			
IC-L4			
IC-L5			

Q1	K - 1		
Q2	L - 1		
Q3	L - 1		
Q4	G - 1		
Q5	H - 1		

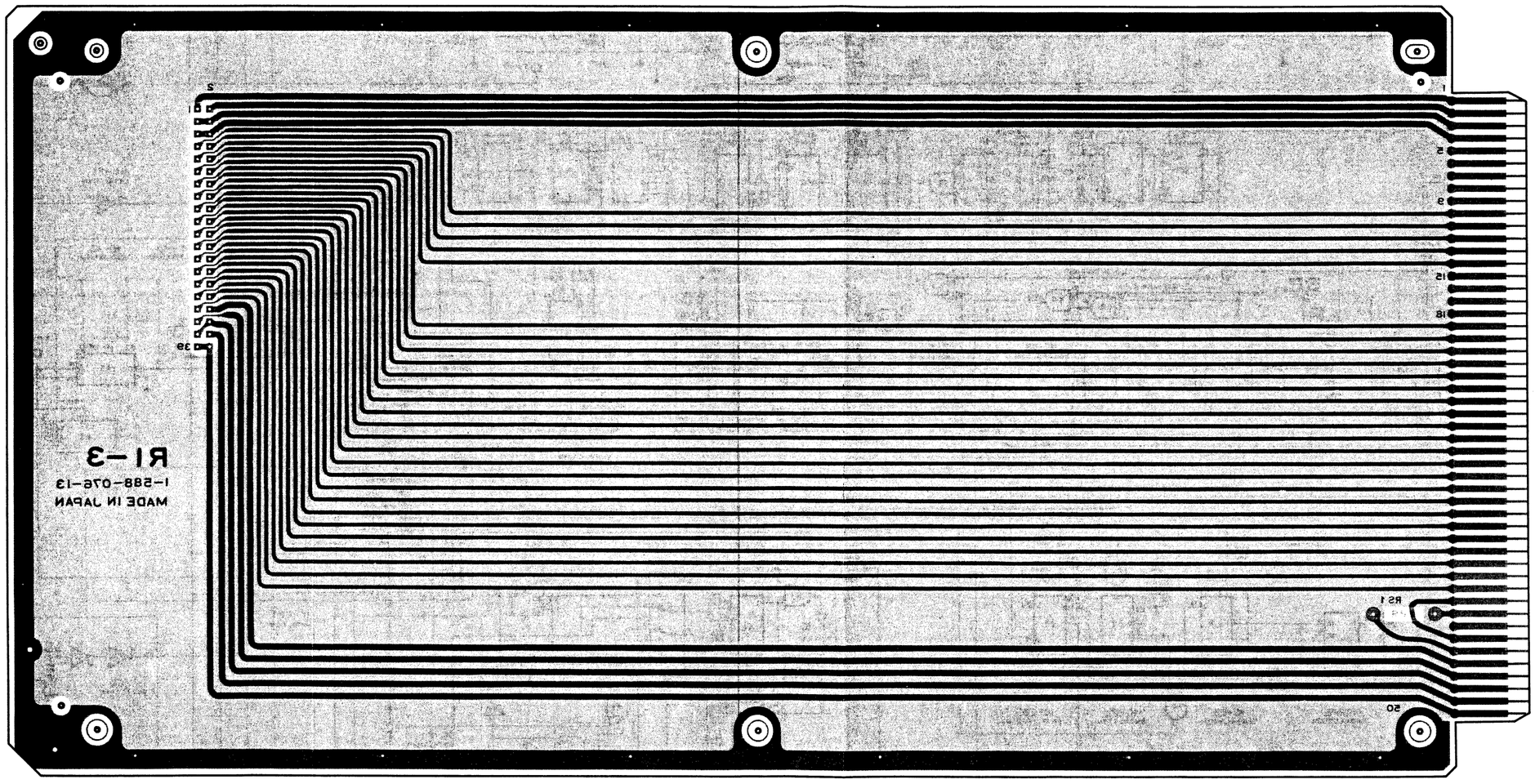
② CK-4 BOARD: CLOCK GENERATOR



① **RI-3 BOARD (1-588-076-13)**

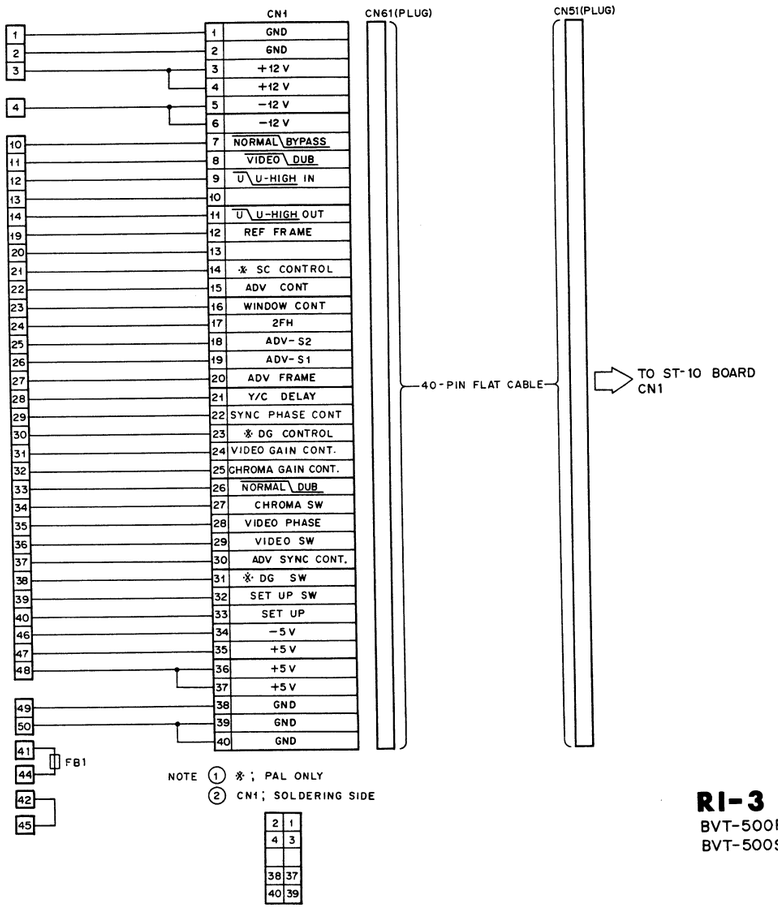
– COMPONENT SIDE –

NOTE: RI-3 board is changed to BE-1 board for BVT-500P only.



① RI-3 BOARD: REMOTE CONTROL INTERFACE

NOTE: RI-3 board is changed to BE-1 board for BVT-500P only.



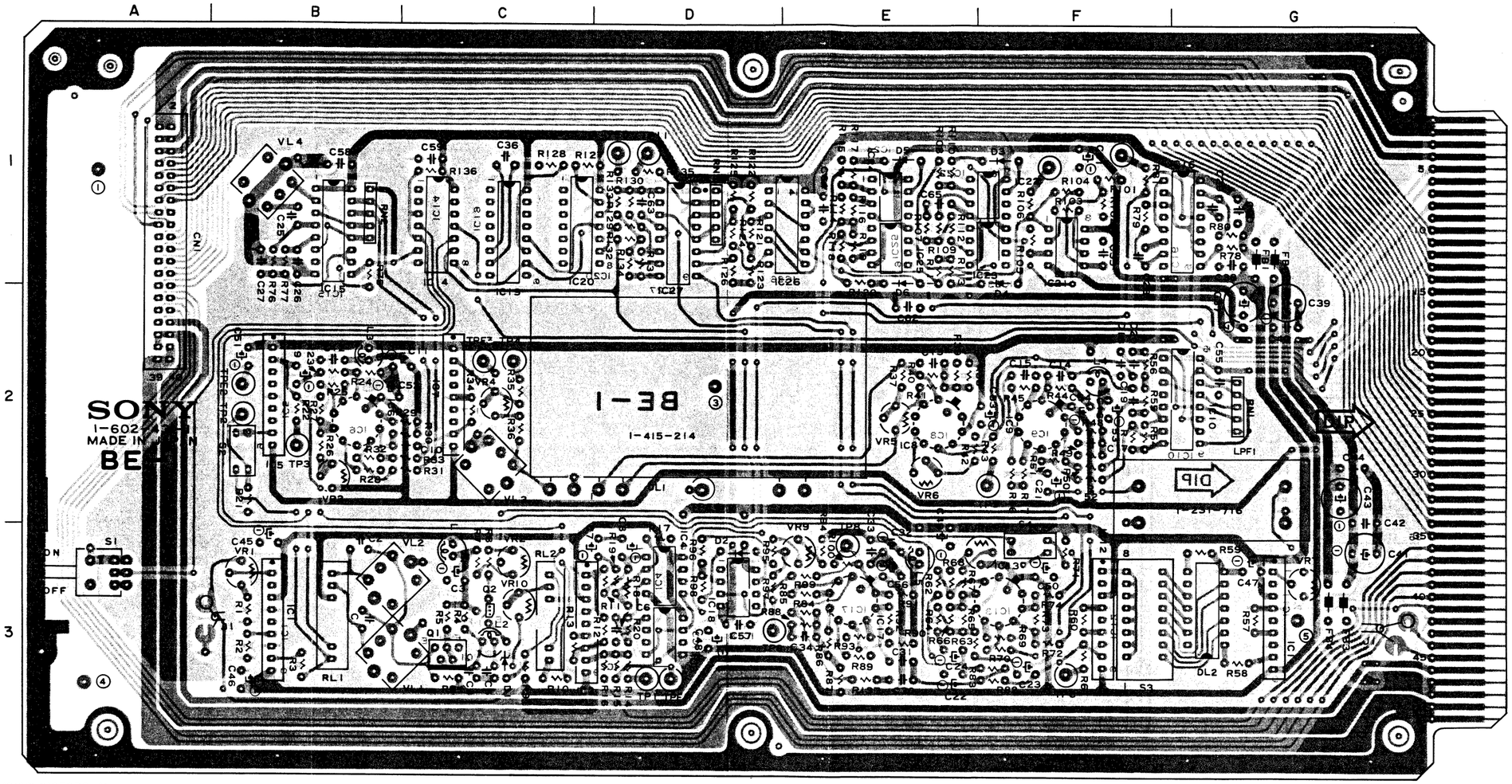
RI-3

BVT-500P: #10001-10600
BVT-500S: #10001-

① BE-1 BOARD (1-602-431-11)

– COMPONENT SIDE –

NOTE: RI-3 board is changed to BE-1 board for BVT-500P only.
BE-1 board includes the function of RI-3 board.



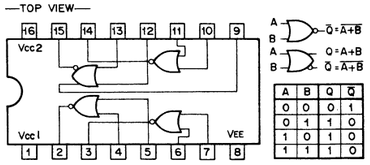
BVT-500P
BE-1 (1-602-431-11)

CN1	A - 1
D1	C - 3
D2	D - 3
D3	F - 1
D4	F - 1
D5	E - 1
D6	E - 1
DL1	D - 2
DL2	G - 3
IC1	B - 3
IC2	C - 3
IC3	D - 3
IC4	D - 3
IC5	B - 2
IC6	B - 2
IC7	C - 2
IC8	E - 2
IC9	F - 2
IC10	G - 2
IC11	G - 3
IC12	F - 3
IC13	F - 3
IC14	C - 1
IC15	B - 1
IC16	G - 1
IC17	E - 3
IC18	D - 3
IC19	C - 1
IC20	C - 1
IC21	F - 1
IC22	F - 1
IC23	F - 1
IC24	E - 1
IC25	E - 1
IC26	E - 1
IC27	D - 1
LPF1	G - 2
Q1	C - 3
Q2	C - 3
RL1	B - 3
RL2	C - 3
S1	A - 3
S2	B - 2
S3	F - 3
S4	F - 3
TP1	D - 3
TP2	B - 2
TP3	B - 2
TP4	C - 2
TP5	F - 2
TP6	F - 3
TP7	F - 1
TP8	E - 3
TP9	D - 3
TP10	F - 1
TP11	D - 1
TPE2	B - 2
TPE3	C - 2
TPE4	D - 2
TPE5	D - 1
VL1	B - 3
VL2	B - 3
VL3	C - 2
VL4	B - 1
VR1	B - 3
VR2	C - 3
VR3	B - 2
VR4	C - 2
VR5	E - 2
VR6	E - 2
VR7	G - 3
VR8	F - 3
VR9	E - 3
VR10	C - 3

MC10102L (MOTOROLA)
HD10102 (HITACHI)

ECL 2-INPUT NOR GATE

—TOP VIEW—

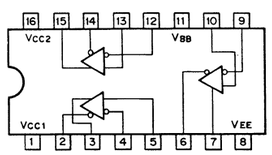


A	B	Q	$\overline{Q}$
0	0	0	1
0	1	1	0
1	0	1	0
1	1	1	0

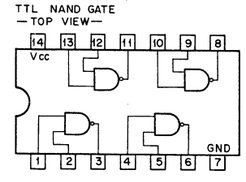
MC10116L (MOTOROLA)
HD10116 (HITACHI)

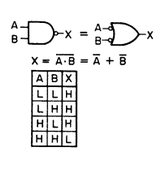
ECL DIFFERENTIAL OR/NOR LINE RECEIVER

–TOP VIEW–



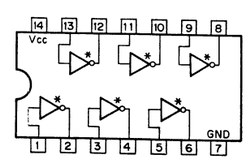
SN7400N (TI) M53200P (MITSUBISHI)
SN74S00N (TI)
SN74LS00N (TI)
TTL NAND GATE
— TOP VIEW —

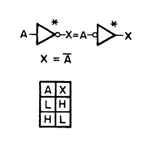




A	B	X
L	L	H
L	H	H
H	L	H
H	H	L

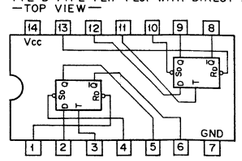
SN7406N (TI) M53206P (MITSUBISHI)
TTL INVERTER BUFFER/DRIVER
WITH OPEN-COLLECTOR
— TOP VIEW —





A	X
L	H
H	L

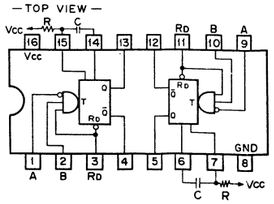
SN7474N (TI) M53274P (MITSUBISHI)
SN74S74N (TI)
SN74LS74N (TI)
TTL D-TYPE FLIP FLOP WITH DIRECT SET/RESET
—TOP VIEW—



INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	T	D	Qn+1	$\overline{Qn+1}$
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H*	H*
H	H	↑	H	H	L
H	H	↑	L	L	H
H	H	L	X	Qn	$\overline{Qn}$

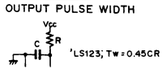
*UNSTABLE

SN74123N (TI)
SN74LS123N (TI)
TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET
—TOP VIEW—

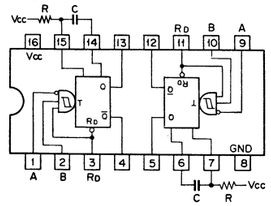


INPUTS			OUTPUTS	
$\overline{R_D}$	A	B	Q	$\overline{Q}$
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↓	⊓	⊔
H	↓	H	⊓	⊔
↑	L	H	⊓	⊔

OUTPUT PULSE WIDTH



SN74221N (TI)
SN74LS221N (TI)
TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

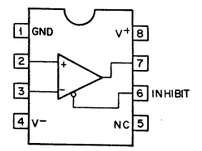


INPUTS			OUTPUTS	
$\overline{R_D}$	A	B	Q	$\overline{Q}$
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↑	⊓	⊔
H	↓	H	⊓	⊔
↑	L	H	⊓	⊔

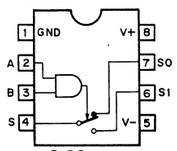
OUTPUT PULSE WIDTH = 0.7CR

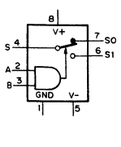
TL510CP (TI)
VOLTAGE COMPARTOR

—TOP VIEW—

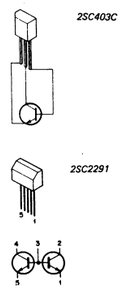


TL601CP (TI)
P-MOS ANALOG SWITCH
—TOP VIEW—



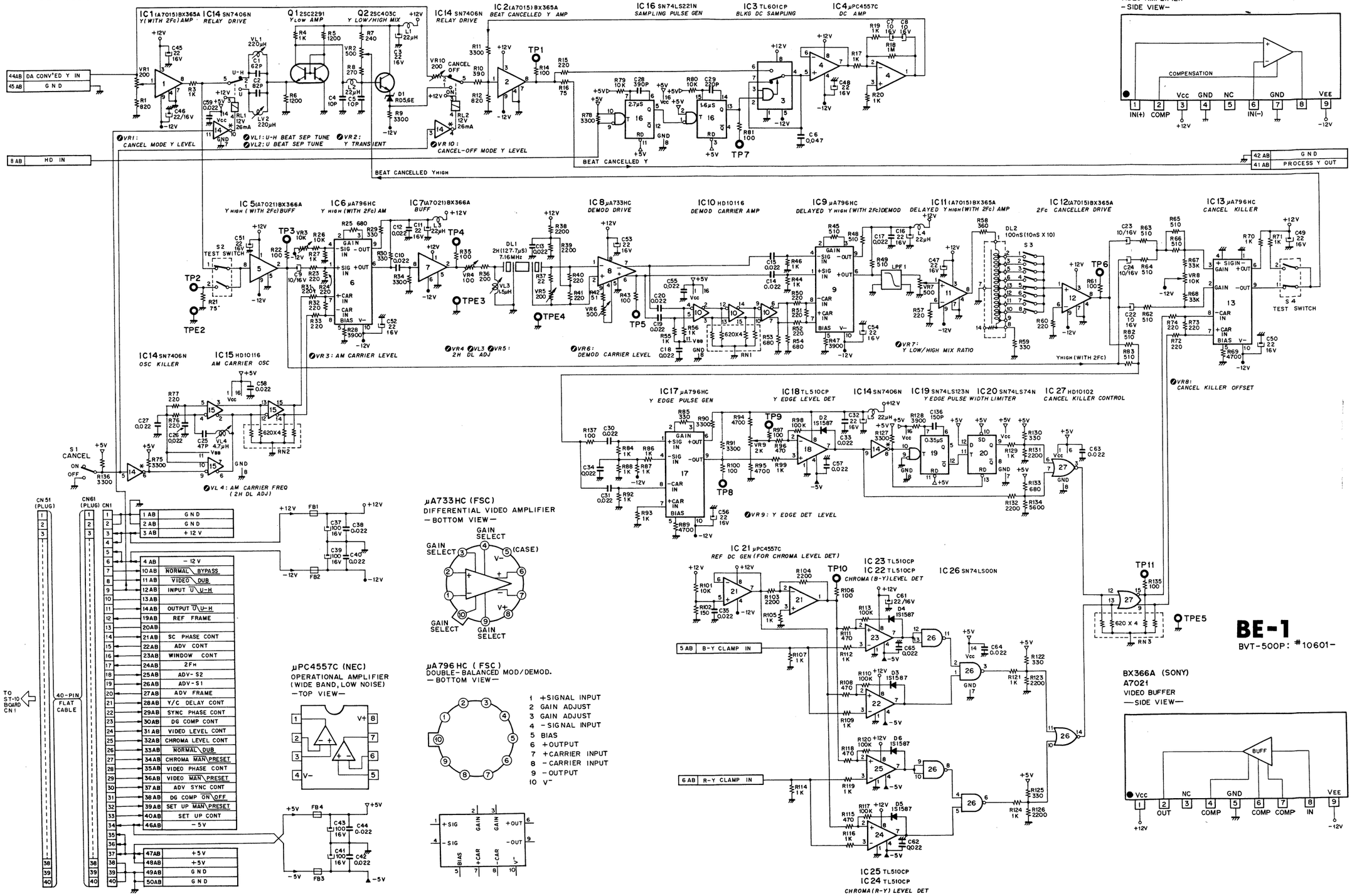


CONT IN		ON CHANNEL
A	B	
0	0	SO
0	1	SO
1	0	SO
1	1	S1



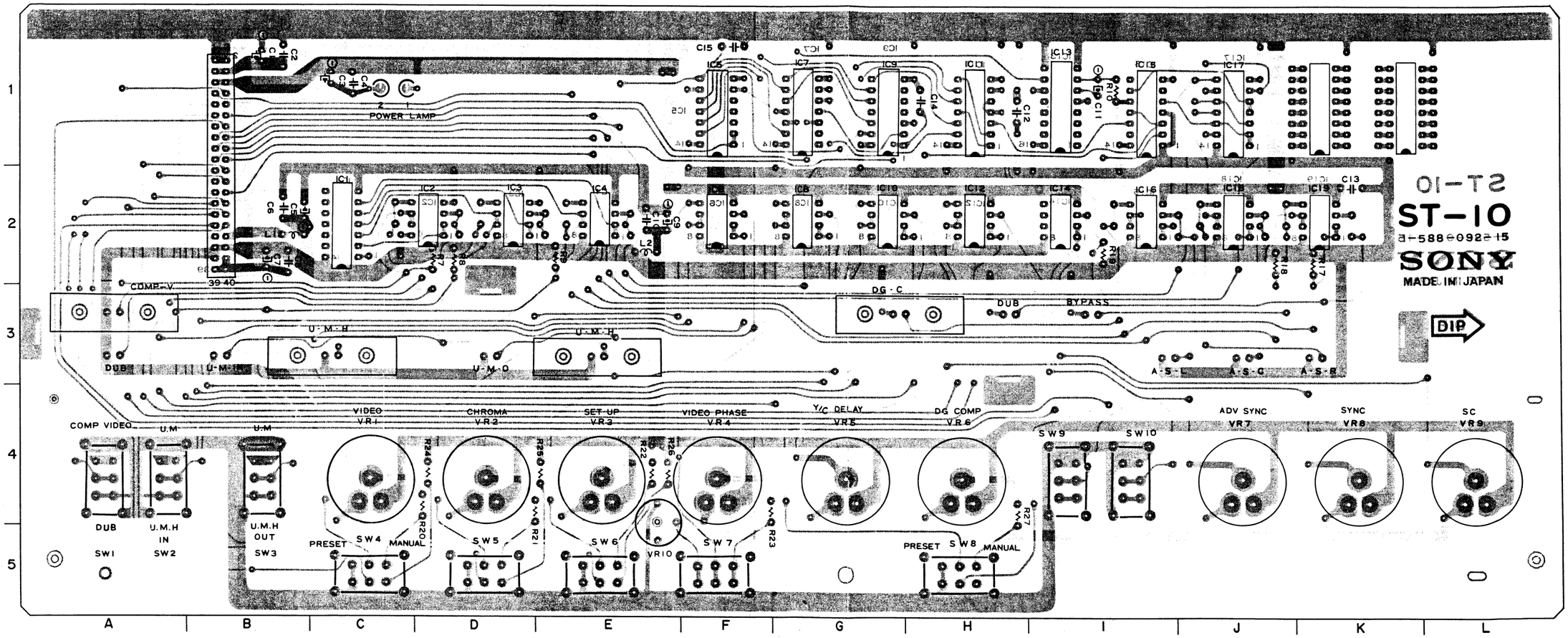
① BE-1 BOARD: BEAT CANCELLER

NOTE: RI-3 board is changed to BE-1 board for BVT-500P only.
BE-1 board includes the function of RI-3 board.



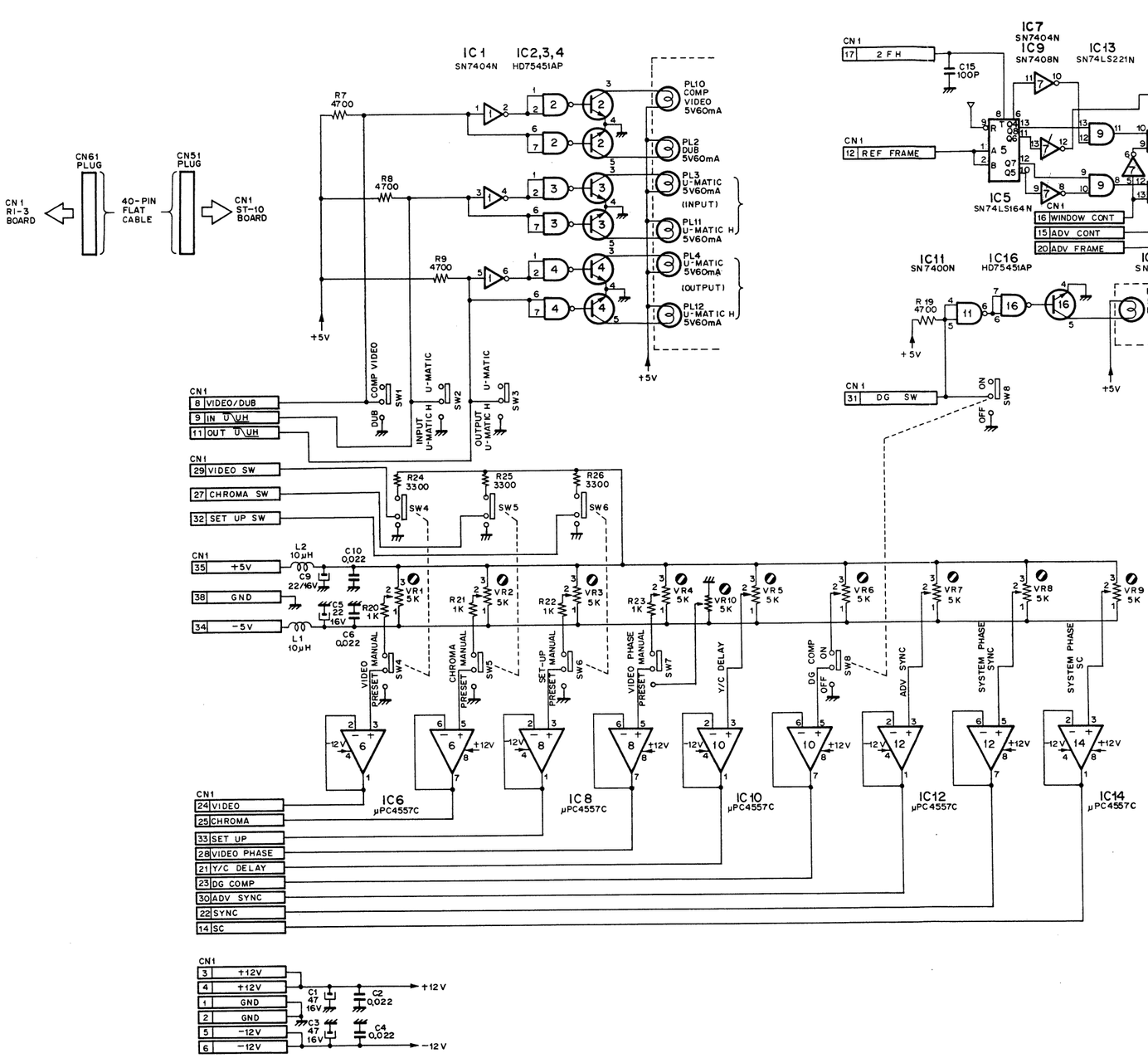
BE-1
BVT-500P: #10601-

ST-10 BOARD (1-588-092-15)
– COMPONENT SIDE –



BVT-500P
BVT-500S
ST-10 (1-588-092-12,-13,-14 or -15)

IC1	C - 2	IC11	H - 1	SW1	A - 4	VR1	C - 4
IC2	D - 2	IC12	H - 2	SW2	A - 4	VR2	D - 4
IC3	D - 2	IC13	I - 1	SW3	B - 4	VR3	E - 4
IC4	E - 2	IC14	I - 2	SW4	C - 5	VR4	F - 4
IC5	F - 1	(PAL)		SW5	D - 5	VR5	G - 4
IC6	F - 2			SW6	E - 5	VR6	H - 4
IC7	G - 1	IC15	I - 1	SW7	F - 5	(PAL)	
IC8	G - 2	IC16	I - 2	SW8	H - 5		
IC9	G - 1	IC17	J - 1	(PAL)		VR7	J - 4
IC10	G - 2	IC18	J - 2			VR8	K - 4
		IC19	K - 2	SW9	I - 4	VR9	L - 4
				SW10	I - 4	(PAL)	
						VR10	E - 4

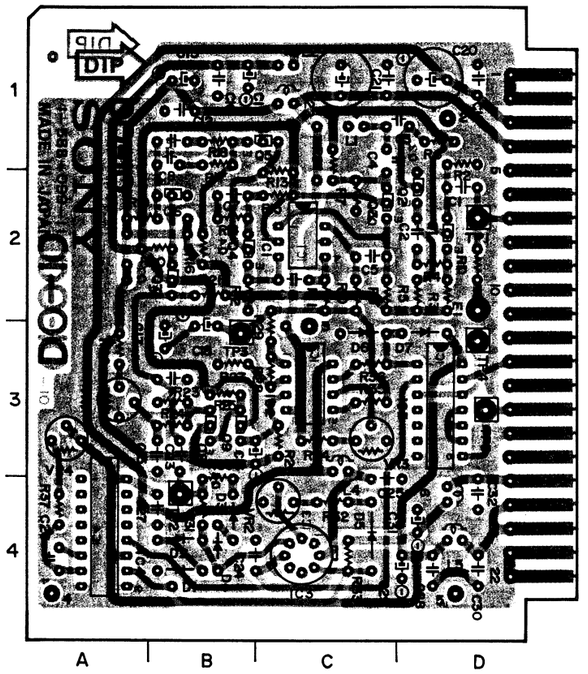


ST-10 (P)

BVT-500P

DO-10 BOARD (1-588-099-11)

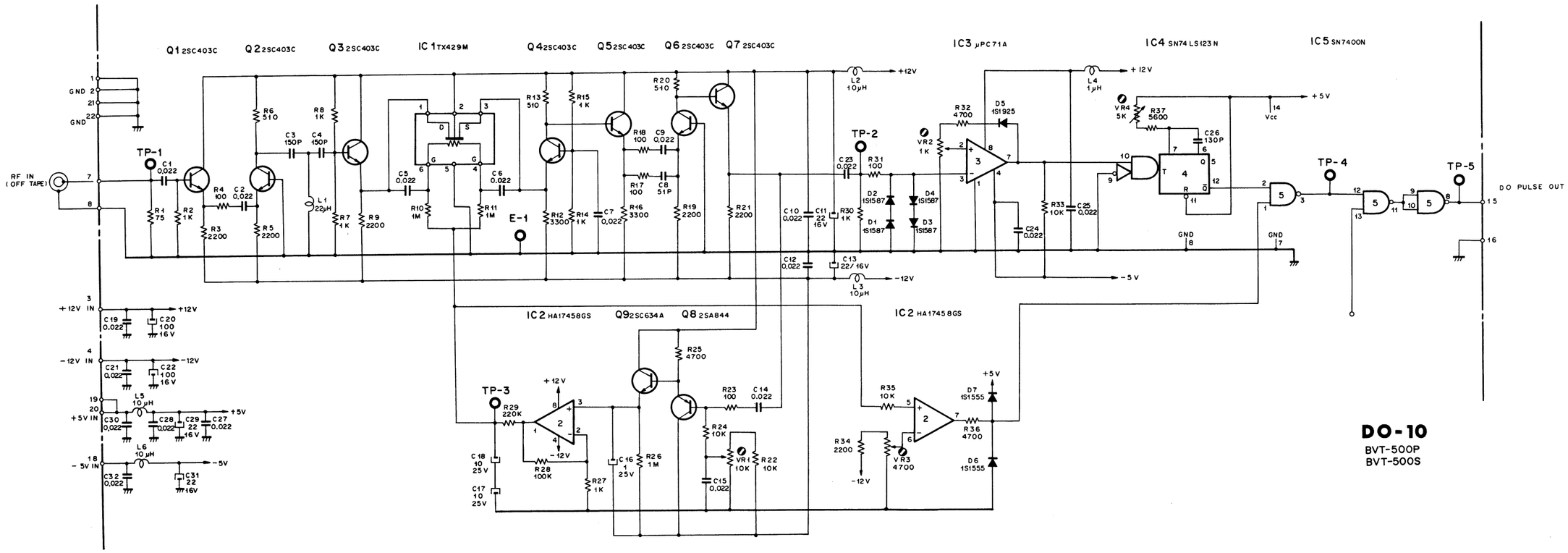
– COMPONENT SIDE –



BVT-500P
BVT-500S
DO-10 (1-588-099-11)

D1	B - 4
D2	B - 4
D3	B - 4
D4	B - 4
D5	C - 4
D6	C - 3
D7	D - 3
E1	D - 2
IC1	C - 2
IC2	C - 3
IC3	C - 4
IC4	A - 4
IC5	D - 3
Q1	D - 2
Q2	D - 2
Q3	C - 2
Q4	B - 2
Q5	C - 1
Q6	B - 2
Q7	B - 2
Q8	B - 3
Q9	B - 3
TP1	D - 2
TP2	B - 4
TP3	B - 3
TP4	D - 3
TP5	D - 3
VR1	A - 3
VR2	C - 4
VR3	C - 3
VR4	A - 3

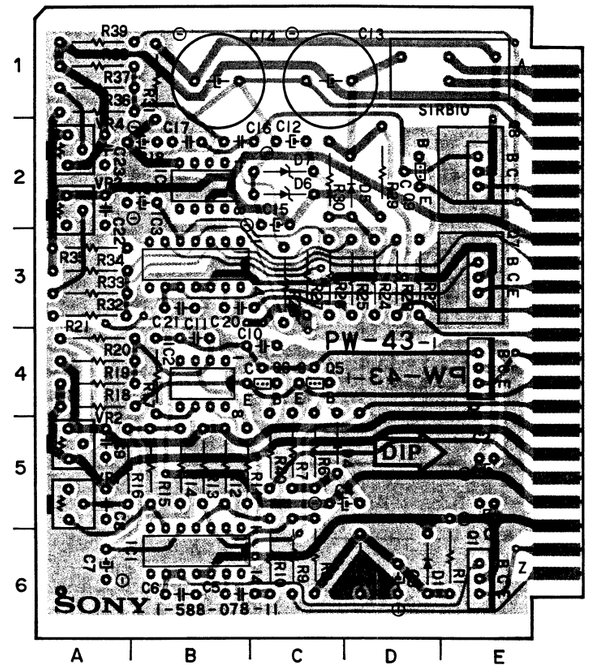
DO-10 BOARD: DROPOUT PULSE GENERATOR



DO-10
BVT-500P
BVT-500S

PW-43 BOARD (1-588-078-11)

– COMPONENT SIDE –

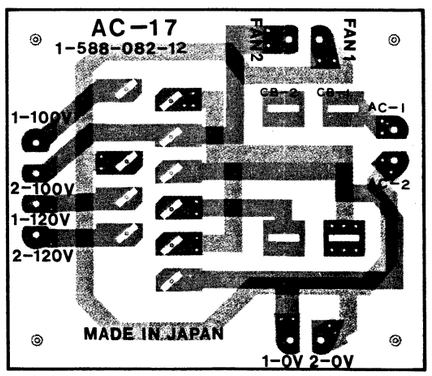


BVT-500P
BVT-500S
PW-43 (1-588-078-11)

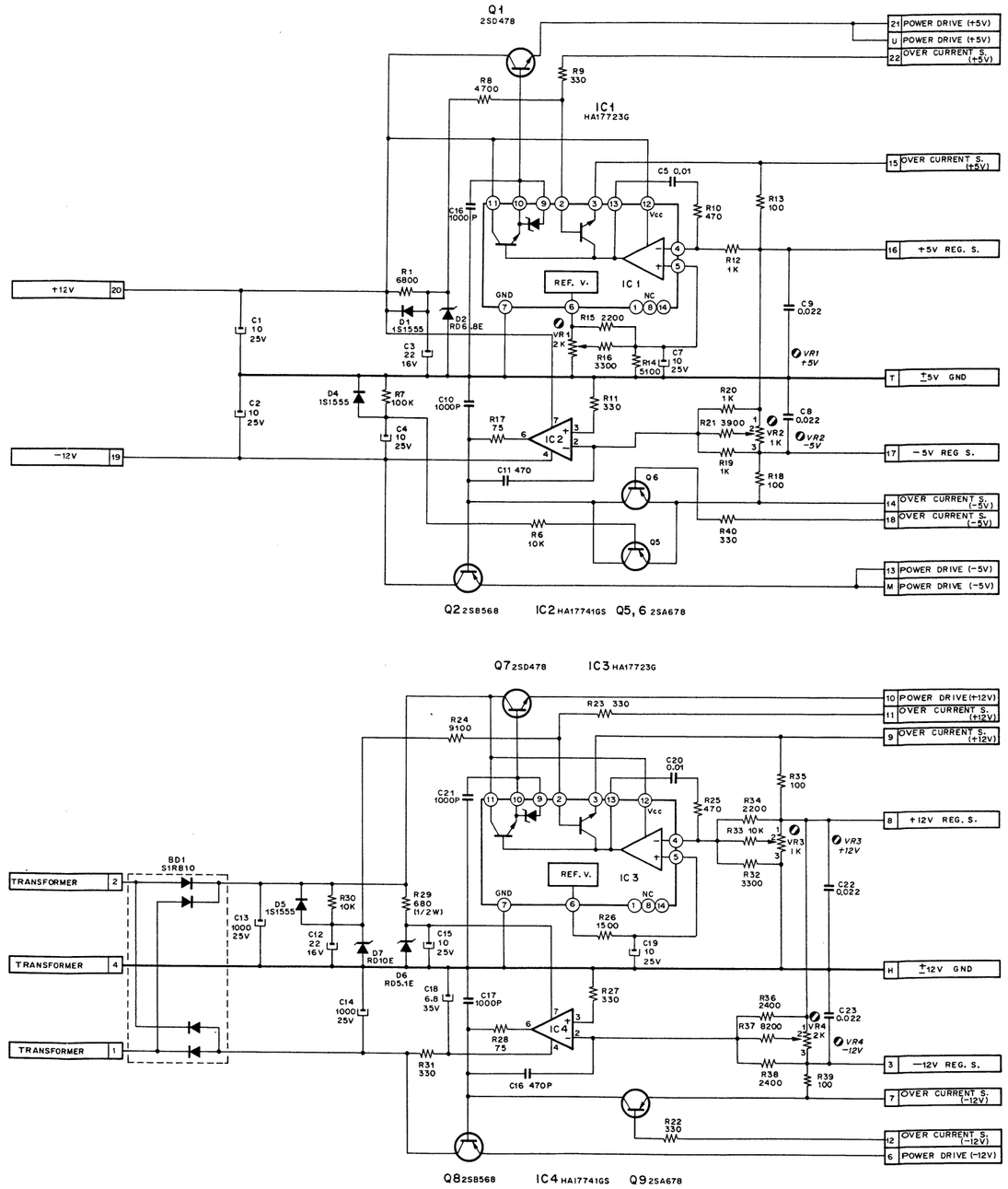
D1	D - 6
D2	D - 6
D4	C - 5
D5	D - 2
D6	C - 2
D7	C - 2
IC1	B - 6
IC2	B - 4
IC3	B - 3
IC4	B - 2
Q1	E - 6
Q2	E - 4
Q5	C - 4
Q6	C - 4
Q7	E - 3
Q8	E - 2
Q9	D - 2
VR1	A - 5
VR2	A - 5
VR3	A - 2
VR4	A - 2

AC-17 BOARD (1-588-082-12)

– SOLDERING SIDE –

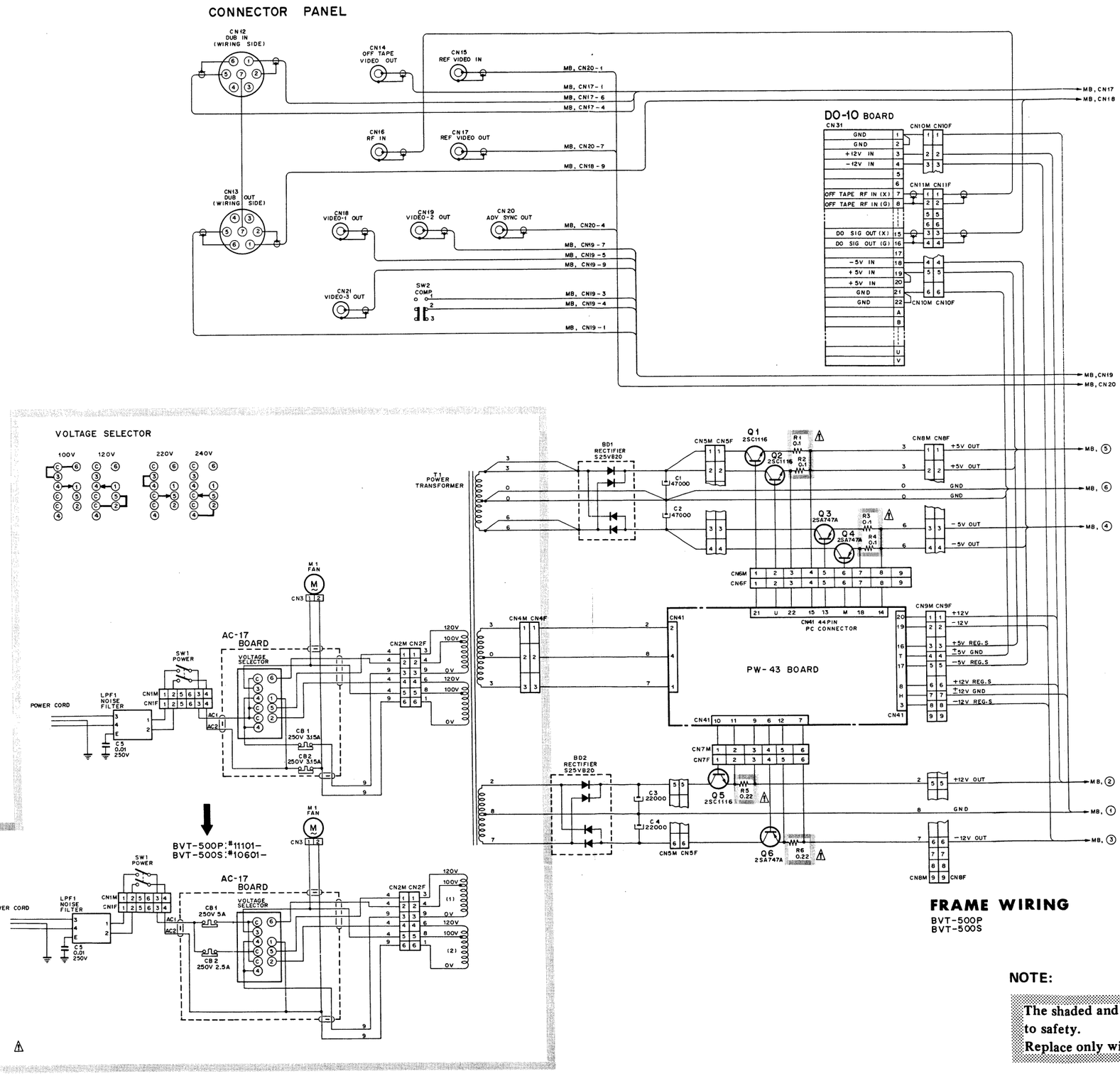


PW-43 BOARD: DC POWER SUPPLY



PW-43
BVT-500P
BVT-500S

FRAME WIRING
AC-17 BOARD

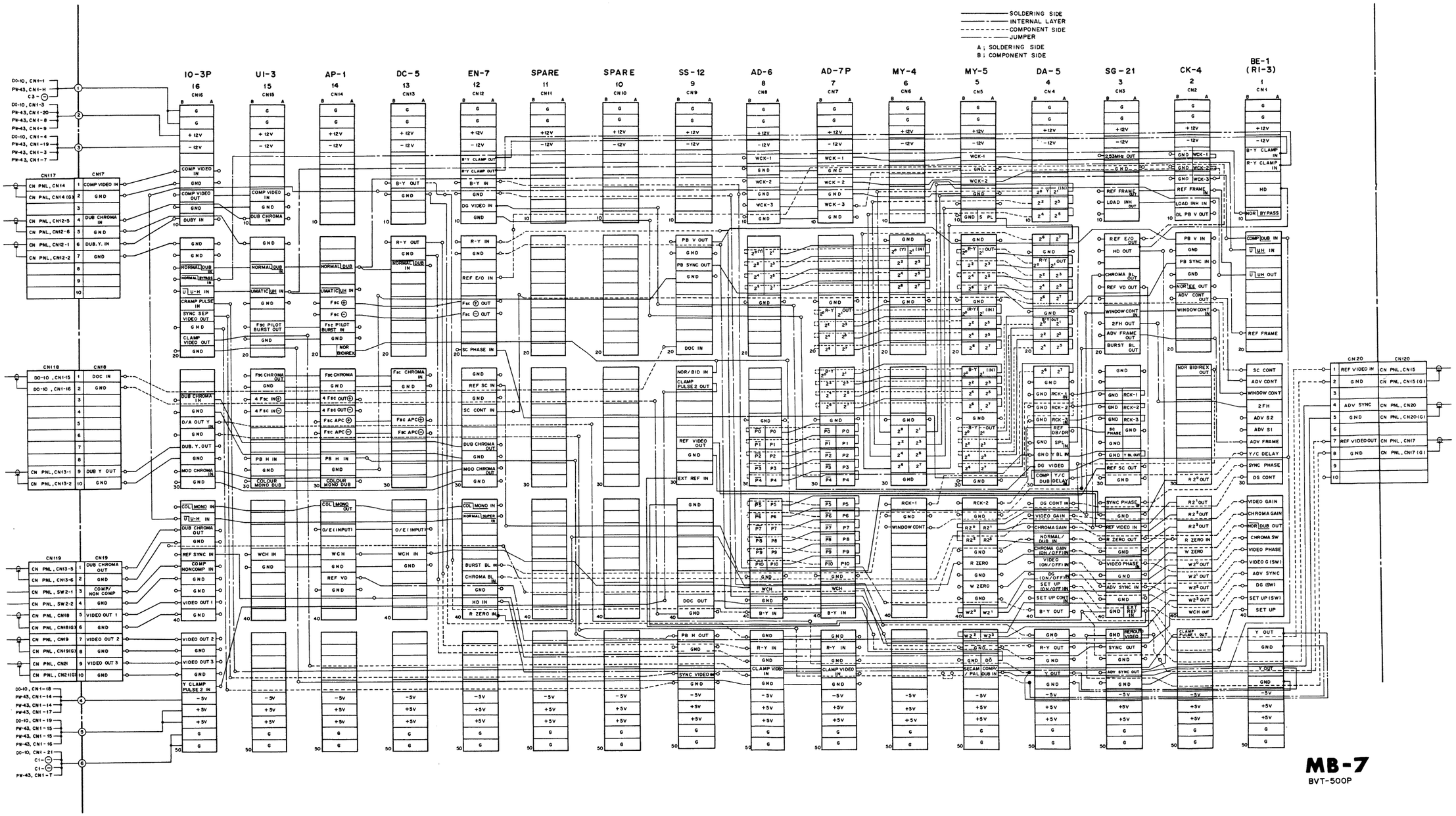


FRAME WIRING
BVT-500P
BVT-500S

NOTE:

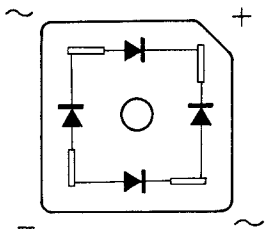
The shaded and ⚠-marked components are critical to safety.
Replace only with same component as specified.

MB-7 BOARD: MOTHER BOARD

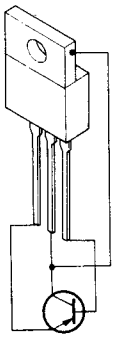


DIODE, TRANSISTOR ELECTRODES

BOTTOM VIEW

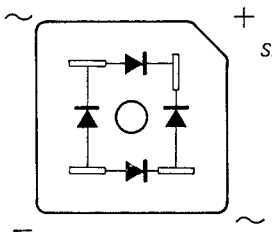


DS16BN



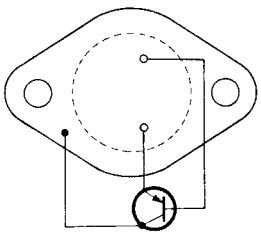
2SB568

BOTTOM VIEW



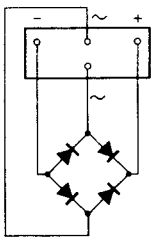
S25VB□□

BOTTOM VIEW



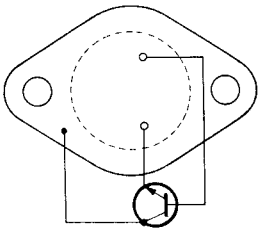
2SA747

BOTTOM VIEW

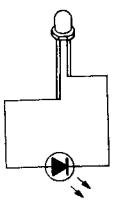


S1RB10

BOTTOM VIEW



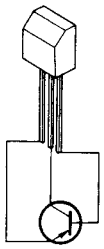
2SC1116



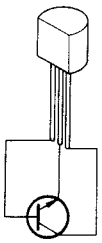
TLR124

BVT-500P
BVT-500S

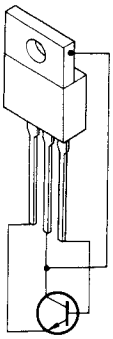
2SA844



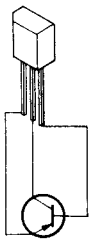
2SC1128
2SC2009



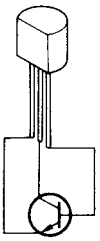
2SD478



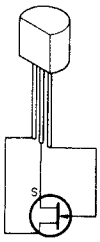
2SA1027R



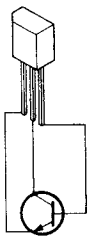
2SC1364



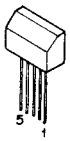
2SK43

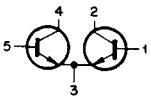


2SC403C
2SC1636



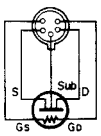
2SC1583
2SC2748





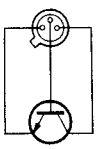
BOTTOM VIEW

TX429D

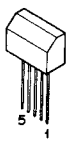


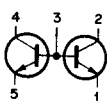
BOTTOM VIEW

2SC689H



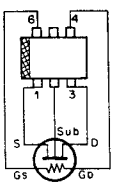
2SC2291





TOP VIEW

TX429M

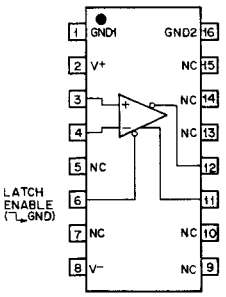


BVT-500P
BVT-500S

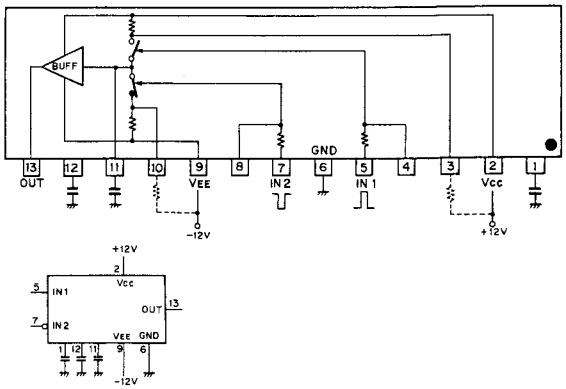
IC DATA

AM685DL (ADVANCED MICRO DEVICE)
VOLTAGE COMPARATOR
(OPEN COLLECTOR OUTPUTS)

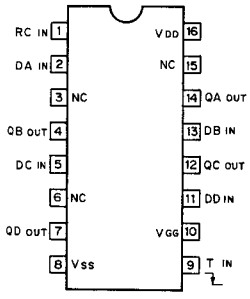
—TOP VIEW—



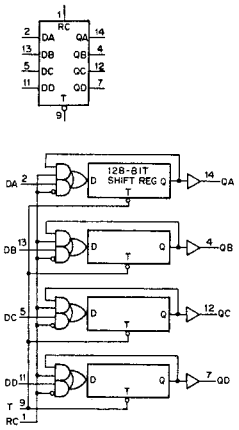
BX381 (SONY)
MFD 01A
PHASE COMPARATOR
- SIDE VIEW-



AM2855PC (ADVANCED MICRO DEVICE)
P-MOS QUAD 128-BIT STATIC SHIFT REGISTER
- TOP VIEW-

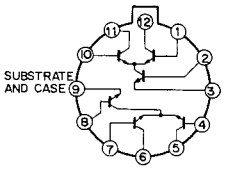


RC: RECIRCULATE CONTROL
DA-DD: DATA INPUTS
QA-QD: DATA OUTPUTS
T: CLOCK

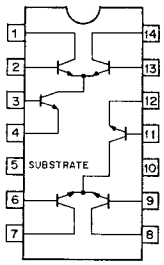


CA3049T (RCA)
DIFFERENTIAL AMPLIFIER

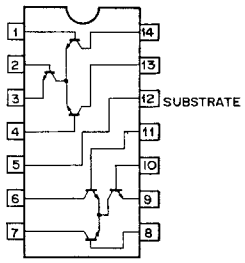
—BOTTOM VIEW—



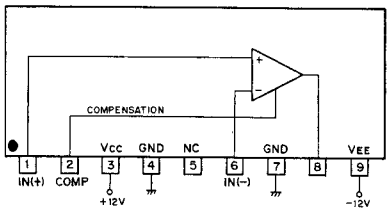
CA3054 (RCA)
DIFFERENTIAL AMPLIFIER
—TOP VIEW—



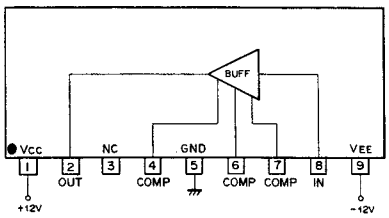
CA3102E(RCA)
HIGH FREQ.DIFFERENTIAL AMPLIFIER
—TOP VIEW—



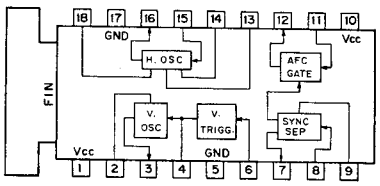
BX365A(SONY)
A7015
VIDEO AMPLIFIER
-SIDE VIEW-



BX366A (SONY)
A7021
VIDEO BUFFER
—SIDE VIEW—

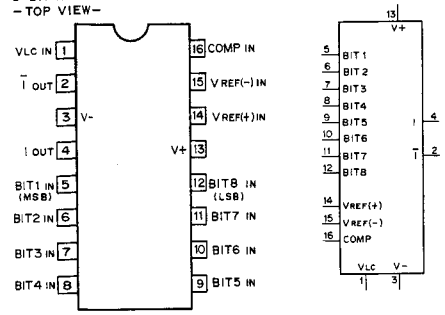


CX104A (SONY)
TV V/H OSC
-TOP VIEW-

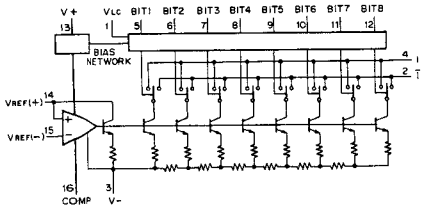


BVT-500P
BVT-500S

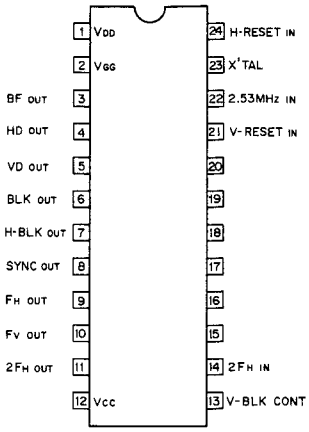
DAC 08HQ (PMI)
8-BIT HIGH SPEED MULTIPLYING D/A CONVERTER
– TOP VIEW –



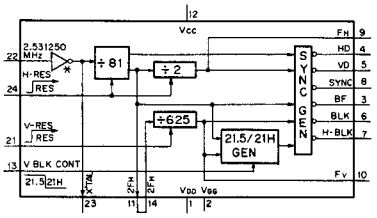
VLC : THRESHOLD CONTROL
MSB : MOST SIGNIFICANT BIT
LSB : LEAST SIGNIFICANT BIT
COMP : COMPENSATION



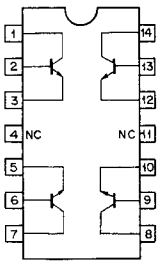
HD 35502 (HITACHI)
P-MOS PAL SYNC GENERATOR
– TOP VIEW –



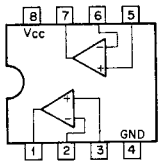
V_{CC} = +5 ± 0.25V
V_{DD} = −5 ± 0.25V
V_{GG} = V_{CC} − 17 ± 1V (≈ −12V)

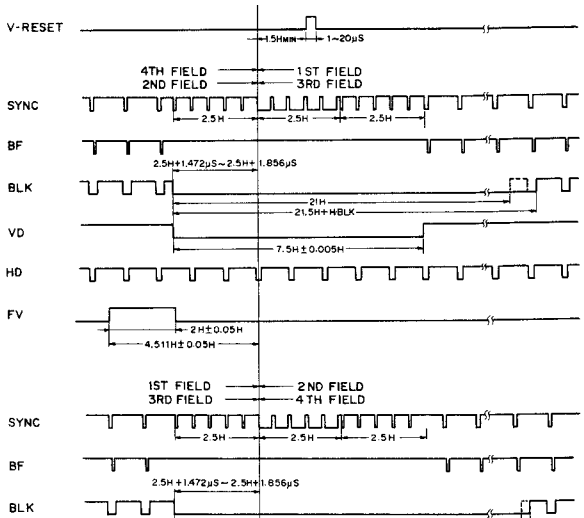


FT5709M (FUJITSU)
TRANSISTOR ARRAY
—TOP VIEW—

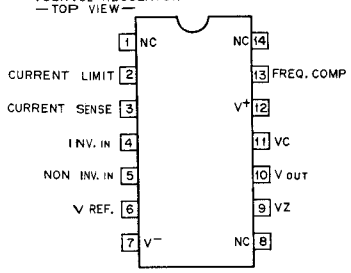


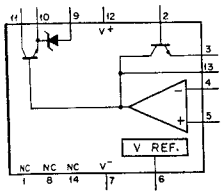
HA17458GS (HITACHI)
μPC1458C (NEC)
LM1458N (NSC)
OPERATIONAL AMPLIFIER
– TOP VIEW –



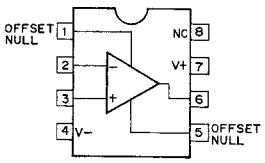


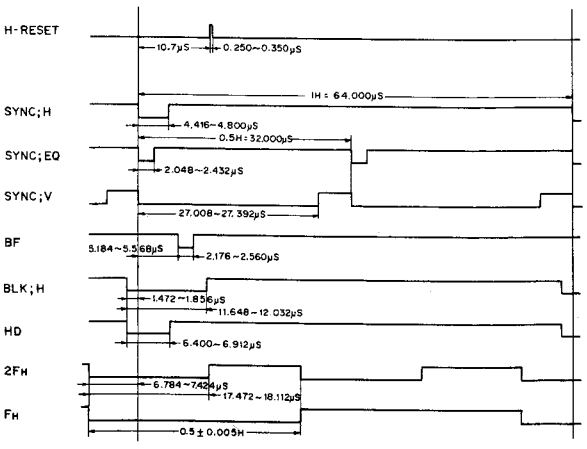
HA17723G (HITACHI)
μA723DC (FSC)
VOLTAGE REGULATOR
—TOP VIEW—





HA17741GS (HITACHI)
μA741TC (FSC)
μA741RC (FSC)
OPERATIONAL AMPLIFIER
—TOP VIEW—

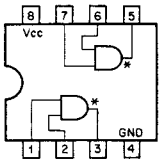


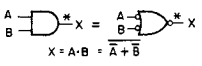


HD75451AP (HITACHI)
SN75451BP (TI)

TTL PERIPHERAL POSITIVE-AND DRIVER WITH OPEN-COLLECTOR

—TOP VIEW —



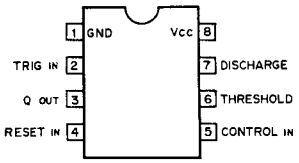


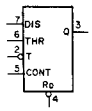
A	B	X
L	L	L
L	H	L
H	L	L
H	H	H

M51841P (MITSUBISHI)
NE555N (SIGNETICS)

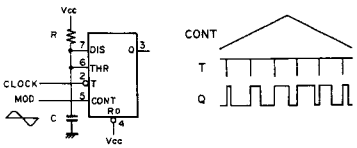
TIMER

—TOP VIEW—





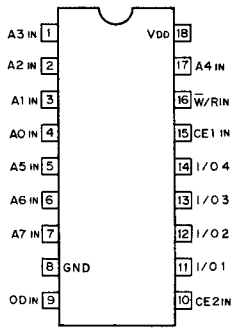
PULSE WIDTH MODULATOR

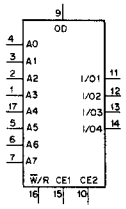


M5L2111AP-2(MITSUBISHI)
M5L2111AP-3(MITSUBISHI)
M58722P-3 (MITSUBISHI)
2111A-2 (INTEL)

N-MOS 1024-BIT (256x4) STATIC RAM

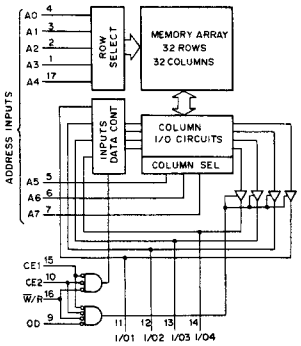
—TOP VIEW—





INPUTS				FUNCTION
CE1	CE2	W/R	OD	
0	0	0	X	WRITE
0	0	1	0	READ
0	0	1	1	DISABLE (OUTPUT; HIGH Z)
X	1	X	X	
1	X	X	X	

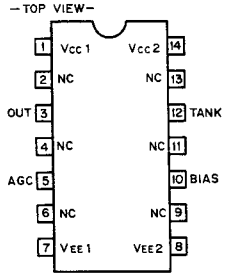
A0-A7; ADDRESS INPUTS
OD; OUTPUT DISABLE
W/R; WRITE/READ SELECT
CE1, CE2; CHIP ENABLE
I/O1- I/O4; DATA INPUTS/OUTPUTS

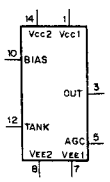


MC1648P (MOTOROLA)

VOLTAGE CONTROLLED OSCILLATOR

—TOP VIEW—

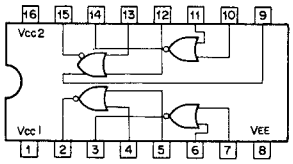


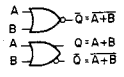


MC10102L (MOTOROLA)
HD10102 (HITACHI)

ECL 2-INPUT NOR GATE

—TOP VIEW—



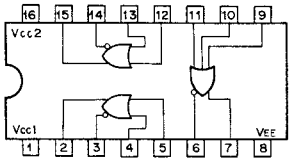


A	B	Q	$\overline{Q}$
0	0	0	1
0	1	1	0
1	0	1	0
1	1	1	0

MC10105L (MOTOROLA)
HD10105 (HITACHI)

ECL 2-3-2-INPUT OR/NOR GATE

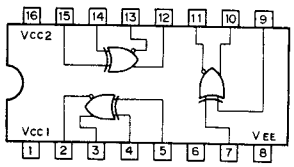
—TOP VIEW—

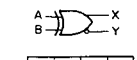


MC10107L (MOTOROLA)
HD10107 (HITACHI)

ECL EXCLUSIVE OR/NOR GATE

—TOP VIEW—



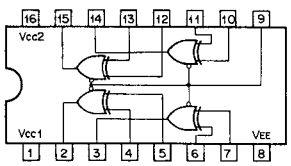


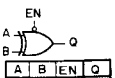
A	B	X	Y
0	0	0	1
0	1	1	0
1	0	1	0
1	1	0	1

MC10113L (MOTOROLA)

ECL EXCLUSIVE OR GATE

—TOP VIEW—



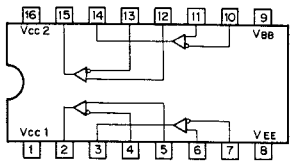


A	B	EN	Q
0	0	0	0
0	1	0	1
1	0	0	1
1	1	0	0
X	X	1	0

MC10115L (MOTOROLA)

ECL LINE RECEIVER

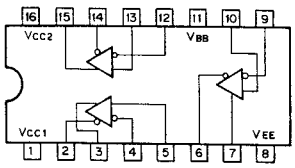
—TOP VIEW—



MC10116L (MOTOROLA)
HD10116 (HITACHI)

ECL DIFFERENTIAL OR/NOR LINE RECEIVER

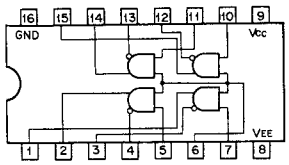
—TOP VIEW—



MC10124L (MOTOROLA)
HD10124 (HITACHI)

ECL TTL-TO-ECL TRANSLATOR

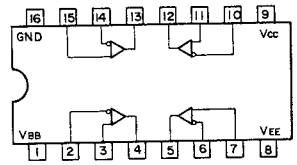
—TOP VIEW—



MC10125L (MOTOROLA)
HD10125 (HITACHI)

ECL ECL-TO-TTL TRANSLATOR

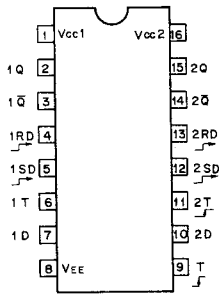
—TOP VIEW—

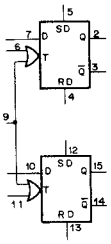


MC10131L (MOTOROLA)
HD10131 (HITACHI)

ECL D-TYPE FLIP FLOP

—TOP VIEW—





INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	T	D	Q_{n+1}	$\overline{Q_{n+1}}$
1	0	X	X	1	0
0	1	X	X	0	1
1	1	X	X	ND	ND
0	0	↓	1	1	0
0	0	↓	0	0	1
0	0	0	X	Qn	$\overline{Q_n}$

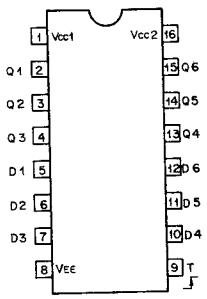
X; DON'T CARE

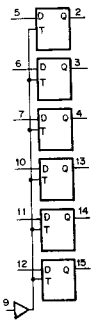
ND; NOT DEFINED

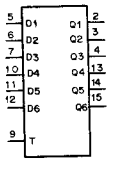
MC10176L (MOTOROLA)

ECL HEX D-TYPE FLIP-FLOP

—TOP VIEW—







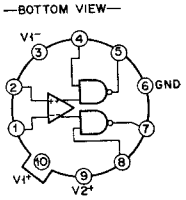
D	T	Q_{n+1}
0	↓	0
1	↓	1
X	0	Q_n

X; DON'T CARE

NE527K (SIGNETICS)

VOLTAGE COMPARATOR

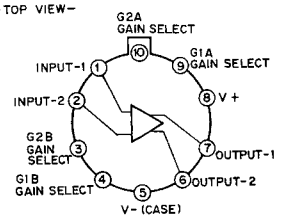
—BOTTOM VIEW—



NE592K (SIGNETICS)

VIDEO AMPLIFIER

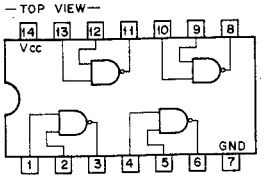
-TOP VIEW-

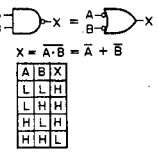


SN7400N (TI) M53200P (MITSUBISHI)
SN74S00N (TI)
SN74LS00N (TI)

TTL NAND GATE

—TOP VIEW—



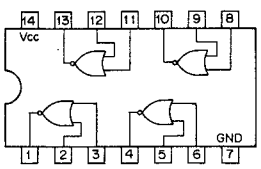


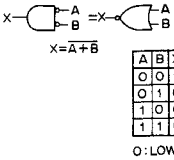
A	B	X
L	L	H
L	H	H
H	L	H
H	H	L

SN7402N (TI) M53202P (MITSUBISHI)
SN74S02N (TI)
SN74LS02N (TI)

TTL 2-INPUT POSITIVE-NOR GATE

—TOP VIEW—





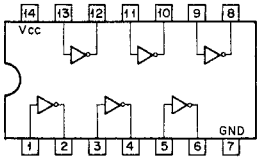
A	B	X
0	0	1
0	1	0
1	0	0
1	1	0

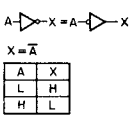
0: LOW LEVEL
1: HIGH LEVEL

SN7404N (TI) M53204P (MITSUBISHI)
SN74L04N (TI)
SN74S04N (TI)
SN74LS04N (TI)

TTL INVERTER

—TOP VIEW—



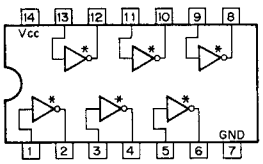


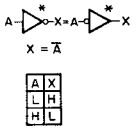
A	X
L	H
H	L

SN7406N (TI) M53206P (MITSUBISHI)

TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR

—TOP VIEW—



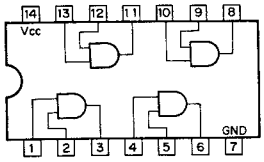


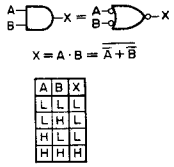
A	X
L	H
H	L

SN7408N (TI), SN74S08N (TI)
SN74LS08N (TI)

TTL 2-INPUT POSITIVE-AND GATE

— TOP VIEW —



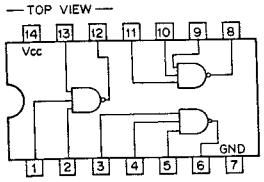


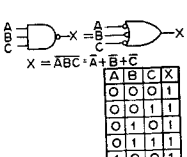
A	B	X
L	L	L
L	H	L
H	L	L
H	H	H

SN7410N (TI)
SN74L10N (TI)
SN74S10N (TI)
SN74LS10N (TI)

TTL 3-INPUT POSITIVE NAND GATE

—TOP VIEW—



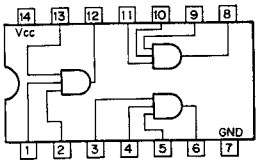


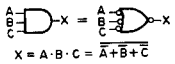
A	B	C	X
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

0: LOW LEVEL
1: HIGH LEVEL

BVT-500P
BVT-500S

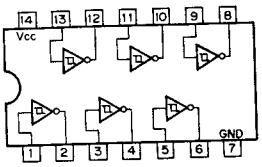
SN74H11N (TI), SN74S11N (TI)
SN74LS11N (TI)
TTL 3-INPUT POSITIVE-AND GATE
— TOP VIEW —

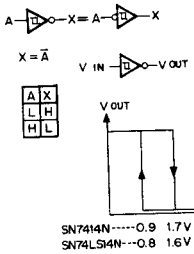




A	B	C	X
L	L	L	L
L	L	H	L
L	H	L	L
L	H	H	L
H	L	L	L
H	L	H	L
H	H	L	L
H	H	H	H

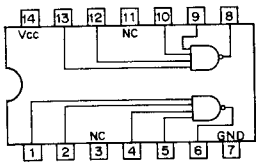
SN74LS14N (TI), SN7414N (TI)
TTL INVERTER SCHMITT TRIGGER
— TOP VIEW —

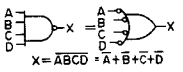




A	X
L	H
H	L

SN74LS20N (TI) SN7420N (TI)
TTL 4-INPUT POSITIVE NAND GATE
—TOP VIEW—

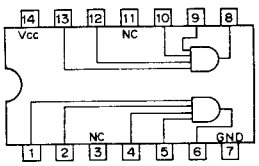


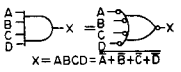


A	B	C	D	X
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
:	:	:	:	:
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

SN74H21N (TI)
SN74LS21N (TI)
TTL 4-INPUT POSITIVE AND GATE
—TOP VIEW—

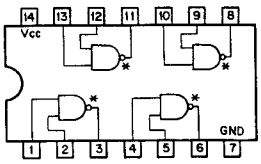


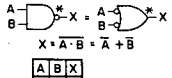


A	B	C	D	X
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
:	:	:	:	:
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

SN7426N (TI)
SN74LS26N (TI)
TTL 2-INPUT NAND GATE WITH OPEN-COLLECTOR
-TOP VIEW-

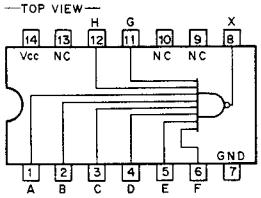




A	B	X
L	L	H
L	H	H
H	L	H
H	H	L

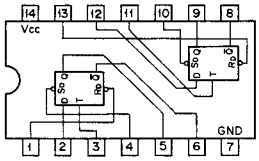
SN7430N (TI)
SN74S30N (TI)
SN74LS30N (TI)
TTL 8-INPUT NAND GATE

—TOP VIEW—



X = $\overline{A \cdot B \cdot C \cdot D \cdot E \cdot F \cdot G \cdot H}$
= $\overline{A}+\overline{B}+\overline{C}+$ -------$+\overline{H}$

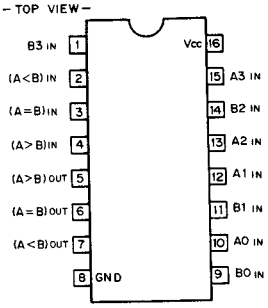
SN7474N (TI) M53274P(MITSUBISHI)
SN74H74N (TI)
SN74L74N (TI)
SN74S74N (TI)
SN74LS74N (TI)
TTL D-TYPE FLIP FLOP WITH DIRECT SET/RESET
—TOP VIEW—

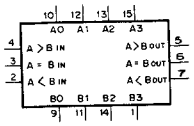


INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	T	D	Qn+1	$\overline{Q_{n+1}}$
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H*	H*
H	H	↑	H	H	L
H	H	↑	L	L	H
H	H	L	X	Qn	$\overline{Q_n}$

*UNSTABLE

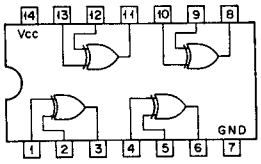
SN7485N (TI)
SN74S85N (TI)
SN74LS85N (TI)
TTL 4-BIT MAGNITUDE COMPARATOR
— TOP VIEW —





INPUTS									OUTPUTS		
DATA COMPARING					CASCADING						
	A3, B3	A2, B2	A1, B1	A0, B0	A<B	A=B	A>B		A<B	A=B	A>B
A>B	A3>B3	X	X	X	X	X	X		0	0	1
	A3=B3	A2>B2	X	X							
	A3=B3	A2=B2	A1>B1	X							
	A3=B3	A2=B2	A1=B1	A0>B0							
A=B	A3=B3	A2=B2	A1=B1	A0=B0	0	0	0		1	0	1
					0	0	1		0	0	1
					X	1	X		0	1	0
					1	0	0		1	0	0
					1	0	1		0	0	0
A<B	A3=B3	A2=B2	A1=B1	A0<B0	X	X	X		1	0	0
	A3=B3	A2=B2	A1<B1	X							
	A3=B3	A2<B2	X	X							
	A3<B3	X	X	X							

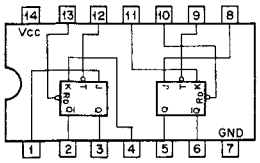
SN74LS86N (TI) SN7486N (TI)
SN74S86N (TI)
TTL EXCLUSIVE OR GATE
— TOP VIEW —



A	B	X
L	L	L
L	H	H
H	L	H
H	H	L

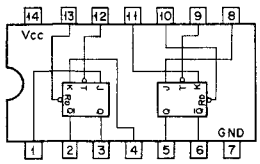
BVT&OP
BVT&OS

SN74107N (TI)
M53307P (MITSUBISHI)
TTL J-K FLIP FLOP WITH DIRECT RESET
— TOP VIEW —



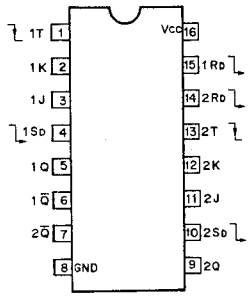
INPUTS				OUT
RD	T	J	K	Qn+1
L	X	X	X	L
H	↓	L	L	Qn
H	↓	L	H	L
H	↓	H	L	H
H	↓	H	H	$\overline{Qn}$

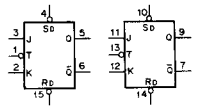
SN74LS107N (TI)
TTL J-K FLIP FLOP WITH DIRECT RESET
— TOP VIEW —



INPUTS				OUT
RD	T	J	K	Qn+1
L	X	X	X	L
H	↓	L	L	Qn
H	↓	L	H	L
H	↓	H	L	H
H	↓	H	H	$\overline{Qn}$
H	H	X	X	Qn

SN74S112N (TI)
SN74LS112AN (TI)
TTL J-K FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —

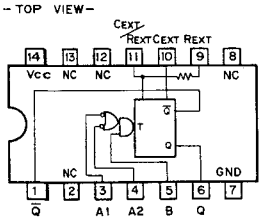




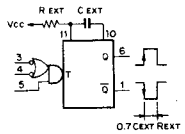
INPUTS					OUTPUTS	
SD	RD	T	J	K	Qn+1	$\overline{Qn+1}$
L	H	X	X	X	H	L
H	L	X	X	X	L	H
L	L	X	X	X	H*	H*
H	H	↓	L	L	Qn	$\overline{Qn}$
			L	H	L	H
			H	L	H	L
			H	H	$\overline{Qn}$	Qn
H	H	H	X	X	Qn	$\overline{Qn}$

*;NONSTABLE

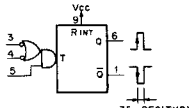
SN74121N (TI)
SN74L121N (TI)
TTL MONOSTABLE MULTIVIBRATOR
— TOP VIEW —



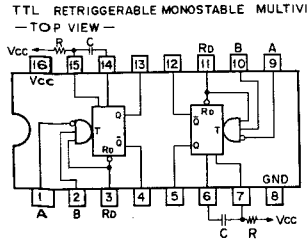
USING EXT. COMPONENTS



USING RINT

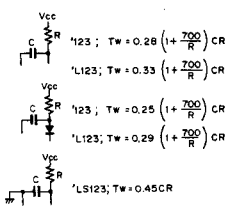


SN74123N (TI)
SN74L123N (TI)
SN74LS123N (TI)
TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET
— TOP VIEW —

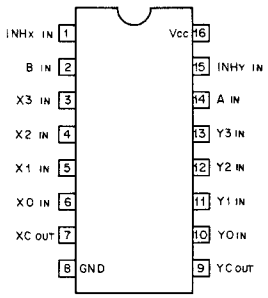


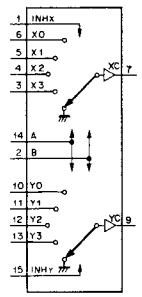
INPUTS			OUTPUTS	
RD	A	B	Q	$\overline{Q}$
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↑	⌐	⌐
H	↑	H	⌐	⌐
↑	L	H	⌐	⌐

OUTPUT PULSE WIDTH



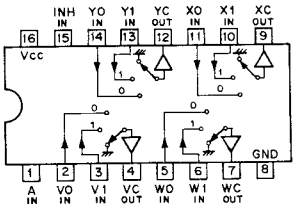
SN74153N (TI)
SN74L153N (TI)
SN74S153N (TI)
SN74LS153N (TI)
TTL 4-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —

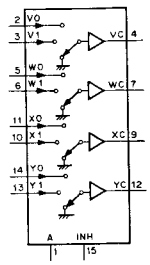




CONTROL IN			ON CHANNEL
INH	B	A	
L	L	L	0
L	L	H	1
L	H	L	2
L	H	H	3
H	X	X	GND

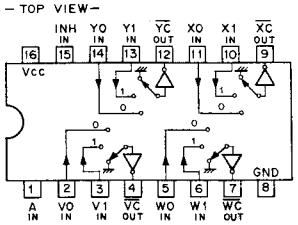
SN74157N (TI)
SN74L157N (TI)
SN74S157N (TI)
SN74LS157N (TI)
TTL 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —

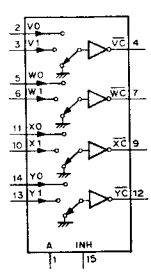




CONT. IN		ON CHANNEL
INH	A	
L	L	0
L	H	1
H	X	GND

SN74S158N (TI)
SN74LS158N (TI)
TTL 2-LINE-TO-1-LINE INVERTED DATA SELECTOR/MULTIPLEXER
— TOP VIEW —





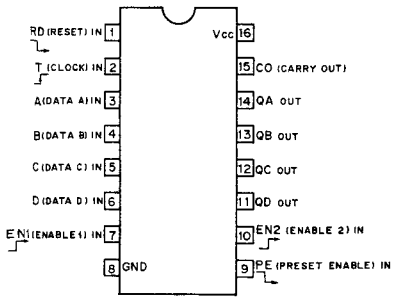
CONT. IN		ON CHANNEL
INH	A	
L	L	0
L	H	1
H	X	GND

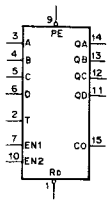
BVT-500P
BVT-500S

SN74161N (TI)
SN74LS161AN (TI)

TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER

– TOP VIEW –





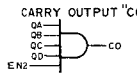
MODE SELECTION

CONTROL INPUTS				MODE
Rd	PE	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

CARRY OUTPUT "CO"

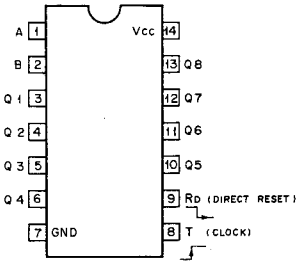


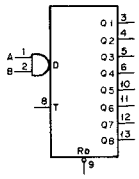
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

SN74164N (TI)
SN74L164N (TI)
SN74LS164N (TI)

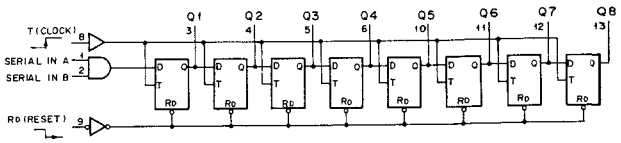
TTL 8-BIT PARALLEL-OUT SERIAL SHIFT REGISTER

—TOP VIEW—





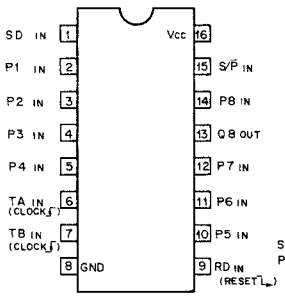
INPUTS				OUTPUTS			
Rd	T	A	B	Q1	Q2	----	Q8
L	X	X	X	L	L	L	L
H	L	X	X	Q1o	Q2o	----	Q8o
H	↑	H	H	H	Q1n	----	Q7n
H	↑	L	X	L	Q1n	----	Q7n
H	↑	X	L	L	Q1n	----	Q7n

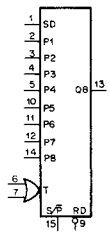


SN74166N (TI)
SN74LS166N (TI)

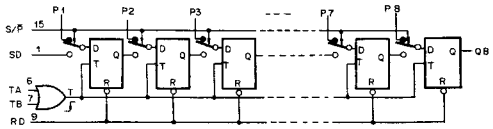
TTL 8-BIT SHIFT REGISTER

—TOP VIEW—





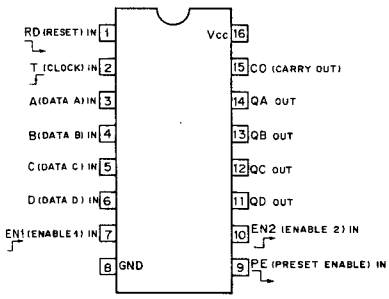
SD; SERIAL DATA INPUT
P1~P8; PARALLEL DATA INPUTS

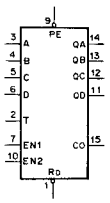


SN74163N (TI)
SN74S163N (TI)
SN74LS163AN (TI)

TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER

– TOP VIEW –





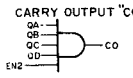
MODE SELECTION

CONTROL INPUTS				MODE
Rd	PE	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

CARRY OUTPUT "CO"

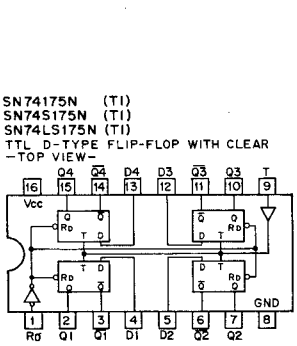


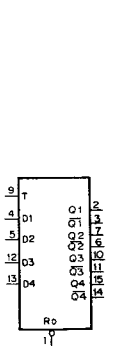
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

SN74175N (TI)
SN74S175N (TI)
SN74LS175N (TI)

TTL D-TYPE FLIP-FLOP WITH CLEAR

—TOP VIEW—





Rd	T	D	Q	$\bar{Q}$
L	X	X	L	H
H	↑	H	H	L
H	↑	L	L	H
H	L	X	Qo	$\bar{Q}o$

X = DON'T CARE

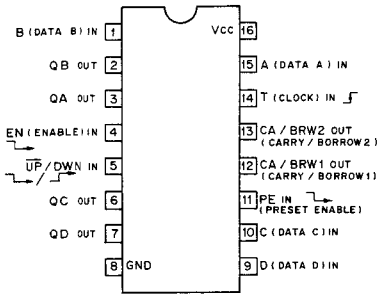
Qo = THE LEVEL OF Q BEFORE THE INDICATED STEADY-STATE INPUT CONDITIONS WERE ESTABLISHED.

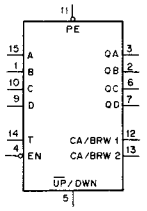
BVI5.00P
BVI5.00S

SN74191N (TI)
SN74LS191N (TI)

TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY UP/DOWN COUNTER

— TOP VIEW —





MODE SELECTION

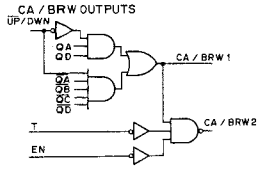
CONTROL INPUTS			MODE
PE	EN	UP/DWN	
0	X	X	PRESET (ASYNCHRONOUS)
1	1	X	NO COUNT
1	0	0	UP COUNT
1	0	1	DOWN COUNT

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

UP COUNT — DOWN COUNT

CA/BRW OUTPUTS



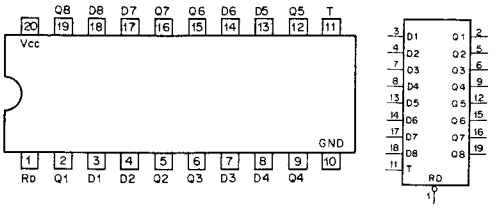
CA/BRW1 OUTPUT IS HIGH WHEN COUNT IS "15" AT UP-COUNT OR WHEN COUNT IS "0" AT DOWN COUNT.

CA/BRW2 OUTPUT IS LOW WHEN CLOCK INPUT IS LOW AND EN INPUT IS LOW AND CA/BRW1 OUTPUT IS HIGH.

SN74273N (TI)
SN74LS273N (TI)

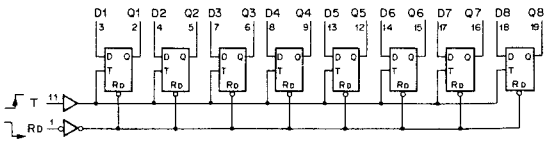
TTL D-TYPE FLIP-FLOP WITH DIRECT RESET

— TOP VIEW —



EACH FLIP-FLOP

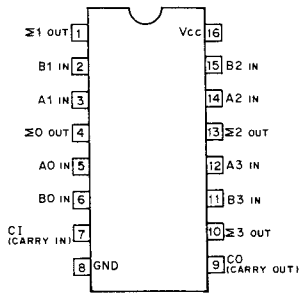
INPUTS			OUT
RD	T	D	Q
L	X	X	L
H	↑	L	L
H	↑	H	H
H	L	X	Q0

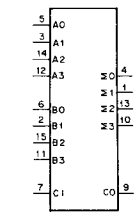


SN74283N (TI)
SN74S283N (TI)
SN74LS283N (TI)

TTL 4-BIT BINARY FULL ADDER

—TOP VIEW—





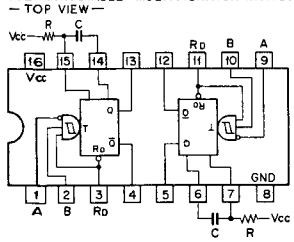
	2^4	2^3	2^2	2^1	2^0	
					CI	CARRY IN
		A3	A2	A1	A0	DATA A IN
+		B3	B2	B1	B0	DATA B IN
	CO	Σ3	Σ2	Σ1	Σ0	CARRY&SUM OUT

EX.						
					1	CI
		1	0	1	1	A
+		1	0	1	0	B
	1	0	1	1	0	OUTPUTS
	CO	Σ3	Σ2	Σ1	Σ0	

SN74221N (TI)
SN74LS221N (TI)

TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT

— TOP VIEW —



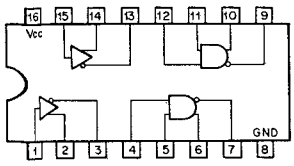
INPUTS			OUTPUTS	
RD	A	B	Q	$\overline{Q}$
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↑	⎍	⎍
H	↓	H	⎍	⎍
↑	L	H	⎍	⎍

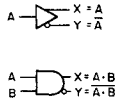
OUTPUT PULSE WIDTH = 0.7CR

SN74265N (TI)

TTL COMPLEMENTARY-OUTPUT ELEMENT

— TOP VIEW —

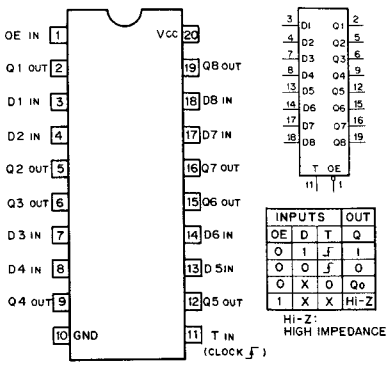




SN74S374N (TI)
SN74LS374N (TI)

TTL 3-STATE OUTPUTS OCTAL D-TYPE FLIP-FPOP

- TOP VIEW -

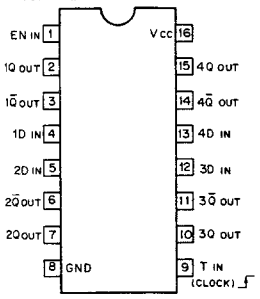


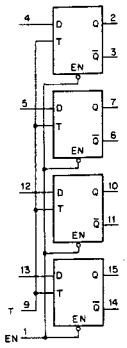
INPUTS			OUT
OE	D	T	Q
0	1	↑	1
0	0	↑	0
0	X	0	Q0
1	X	X	Hi-Z

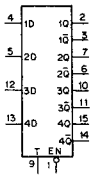
Hi-Z: HIGH IMPEDANCE

BVT-500P
BVT-500S

SN74LS379N (TI)
TTL QUAD D-TYPE FLIP-FLOP WITH ENABLE
– TOP VIEW –





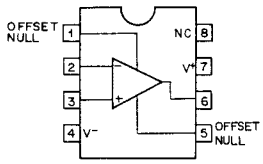


EACH FLIP-FLOP

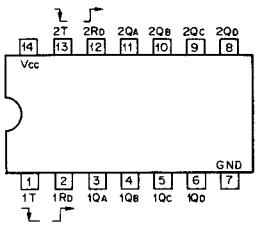
INPUTS			OUT	
EN	T	D	Q	Q̄
1	X	X	Q_0	$\bar{Q}_0$
0	↓	1	1	0
0	↓	0	0	1
X	0	X	Q_0	$\bar{Q}_0$

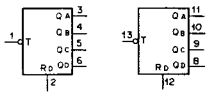
TL081CP (TI)
OPERATIONAL AMPLIFIER
(JFET INPUT)

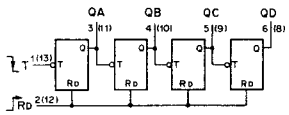
—TOP VIEW—



SN74393N (TI)
SN74LS393N (TI)
TTL 4-BIT BINARY COUNTER
—TOP VIEW—







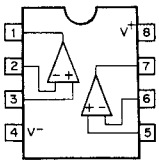
COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

RESET/COUNT FUNCTION

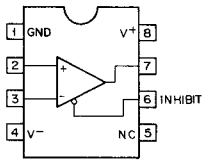
RD	QD	QC	QB	QA
1	0	0	0	0
0	COUNT			

TL082CP (TI)
TL082ACP (TI)
TL082BCP (TI)
OPERATIONAL AMPLIFIER
(JFET-INPUT)
– TOP VIEW –



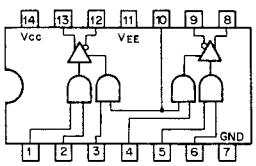
TL510CP (TI)
VOLTAGE COMPARTOR

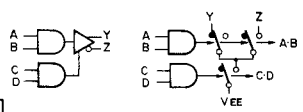
—TOP VIEW—



SN75110AN (TI)
LINE DRIVER

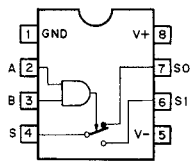
—TOP VIEW—

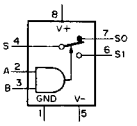




INPUTS				OUTPUTS	
A	B	C	D	Y	Z
X	X	X	L	OFF	OFF
X	X	L	X	OFF	OFF
X	L	H	H	ON	OFF
L	X	H	H	ON	OFF
H	H	H	H	OFF	ON

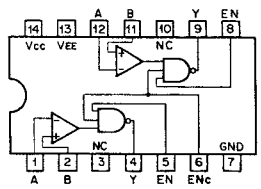
TL601CP (TI)
P-MOS ANALOG SWITCH
– TOP VIEW –





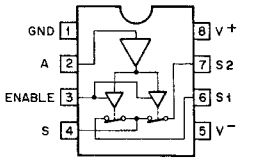
CONT IN		ON CHANNEL
A	B	
0	0	SO
0	1	SO
1	0	SO
1	1	S1

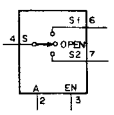
SN75207N (TI)
SN75207BN (TI)
BIPOLAR LINE RECEIVER (TTL COMPATIBLE)
—TOP VIEW—



INPUTS			OUT
B – A	EN	ENc	Y
B – A ≧ 10mV	X	L	H
	L	X	H
	H	H	L
|B – A| < 10mV	X	L	H
	L	X	H
	H	H	?
B – A ≦ –10mV	X	X	H

TL607CP (TI) SN72607P (TI)
MOS ANALOG SWITCH
—TOP VIEW—

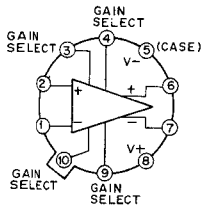




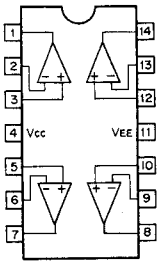
INPUTS		SW
A	EN	
X	L	OPEN
L	H	6–7
H	H	6–7

BVT-500P
BVT-500S

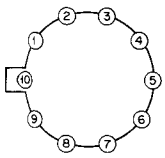
μA733HC (FSC)
DIFFERENTIAL VIDEO AMPLIFIER
— BOTTOM VIEW —



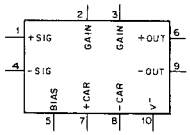
μPC324C (NEC)
LM324 (NSC)
CA324 (RCA)
QUAD. OP AMPLIFIER
— TOP VIEW —



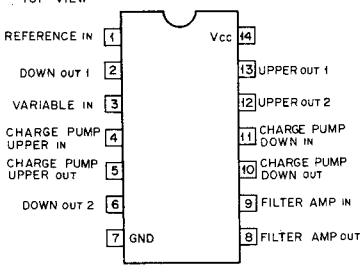
μA796HC (FSC)
DOUBLE-BALANCED MOD/DEMOD.
— BOTTOM VIEW —

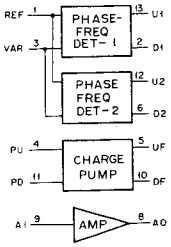


1 +SIGNAL INPUT
2 GAIN ADJUST
3 GAIN ADJUST
4 −SIGNAL INPUT
5 BIAS
6 +OUTPUT
7 +CARRIER INPUT
8 −CARRIER INPUT
9 −OUTPUT
10 V⁻



μPC1008C (NEC)
PHASE / FREQ. DETECTOR
— TOP VIEW —

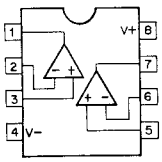




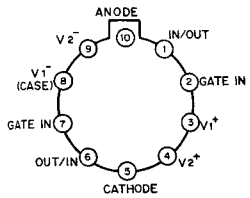
μPC71A (NEC)
μA710HC (FSC)
LM710C (NSC)
MC1710 (MOTOROLA)
SN72710 (TI)

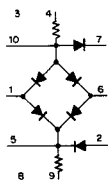
HIGH SPEED VOLTAGE COMPARATOR
-TOP VIEW-

μPC4557C (NEC)
OPERATIONAL AMPLIFIER
(WIDE BAND, LOW NOISE)
—TOP VIEW—



μPC91A (NEC)
ANALOG SWITCH
—BOTTOM VIEW—





BVT-500P
BVT-500S

SECTION 4
GENERAL INFORMATION FOR ALIGNMENT

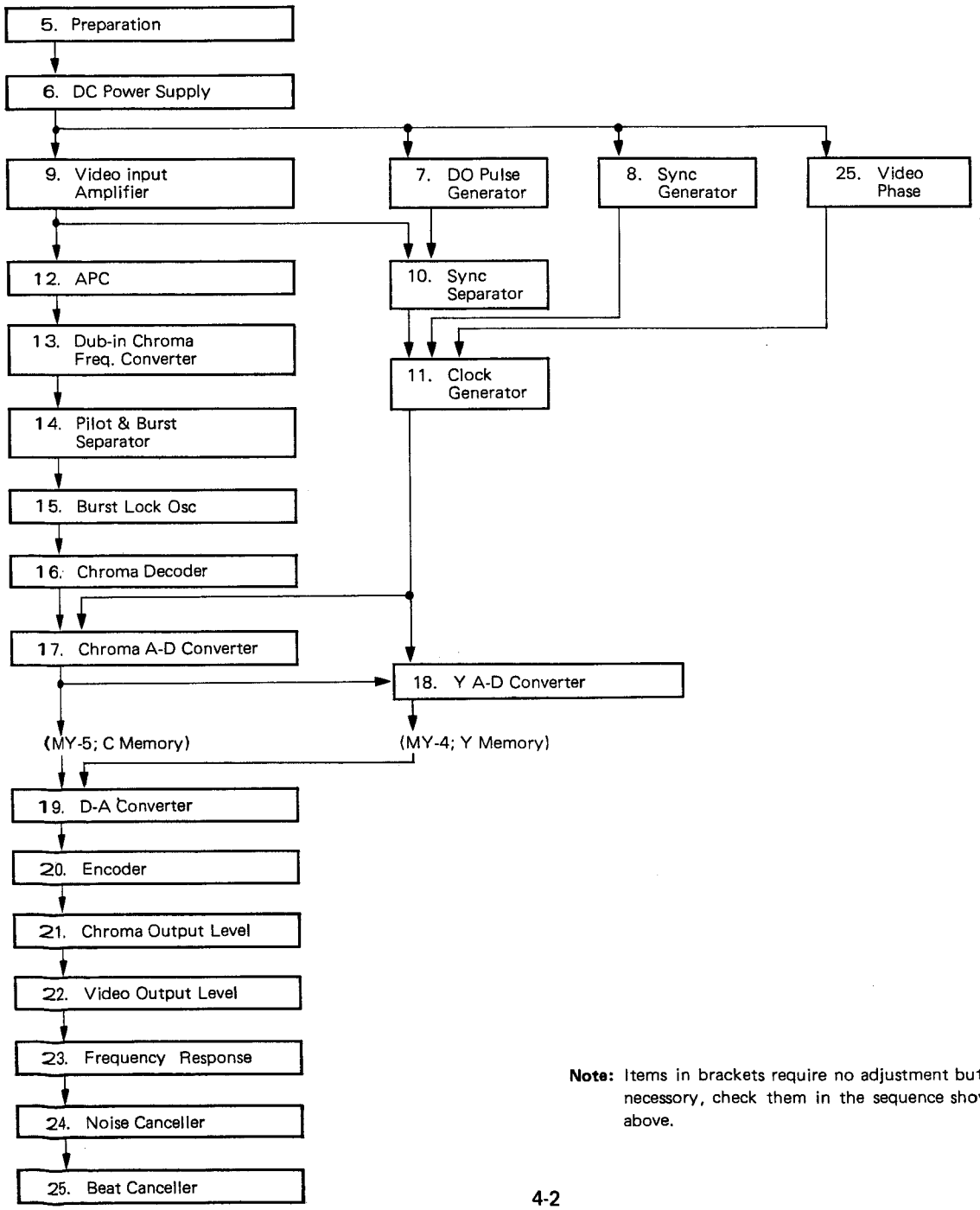
4-1. INDEX OF ADJUSTMENT COMPONENTS

① BE-1 Board

S1; Beat Canceller ON/OFF switch 1-4-3, 5-3

S2	5-3	VR3	26-2
S3	5-3, 26-5	VR4	26-3
S4	5-3	VR5	26-3
VL1	26-5	VR6	26-2, 26-3
VL2	26-5		26-4
VL3	26-3	VR7	26-5
VL4	26-2, 26-3	VR8	26-8
VR1	26-7	VR9	26-6
VR2	26-9	VR10	26-7

4-2. ALIGNMENT SEQUENCE



Note: Items in brackets require no adjustment but if necessory, check them in the sequence shown above.

4-3. ADJUSTMENTS AFTER BOARD REPLACEMENT

When the following circuit boards are replaced with new one, the several adjustments shown in the table below should be performed.

Replaced Board	Section of Required Adj.
ST-10	25-1
PW-43	6
DO-10	none
⑯ IO-3	9-1 16-6 22-1, 3, 4, 7, 8
⑮ UI-3	13-2 14-2, 3
⑭ AP-1	12-1, 2 15-1, 2
⑬ DC-5	16-1, 2, 5, 6
⑫ EN-7	21 22-4, 7, 8 25-2
⑨ SS-12	none
⑧ AD-6	none
⑦ AD-7	none
⑥ MY-4	none
⑤ MY-5	none
④ DA-5	19-1, 2, 4 21 22-1 23
③ SG-21	none
② CK-4	11-1, 2, 3
① BE-1	none

SECTION 5
PREPARATION FOR ALIGNMENT

5-1. TEST EQUIPMENTS

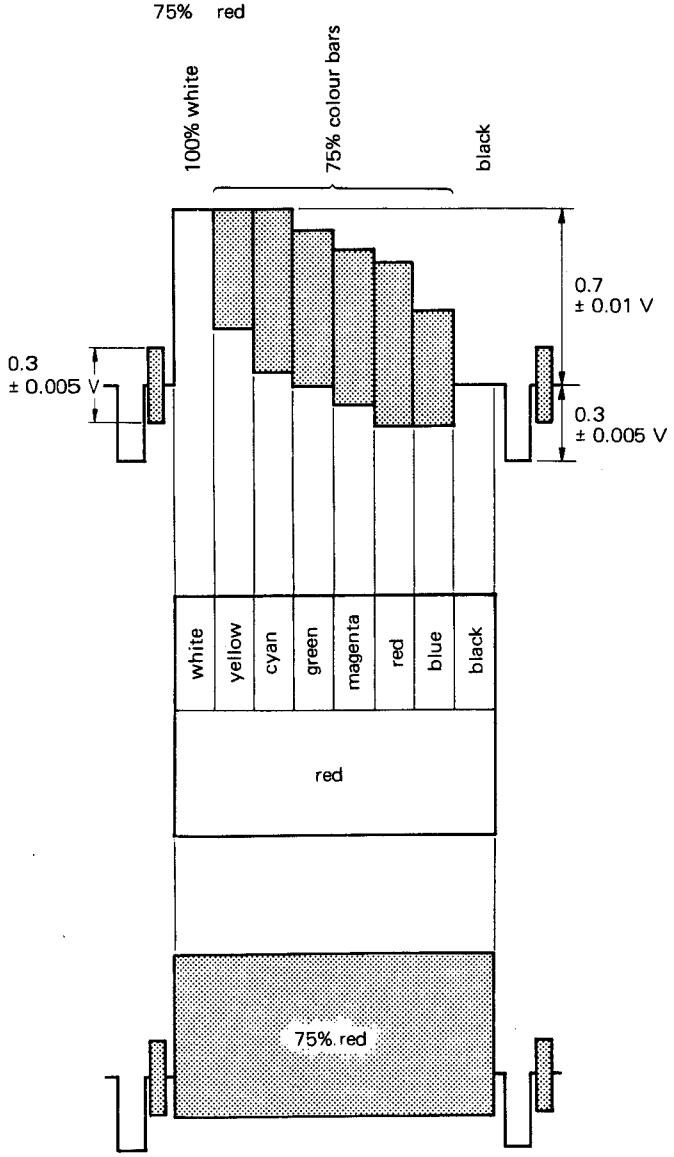
(1) PAL Colour Bars Generator: Tektronix Type 145

Tektronix Type 145 colour bars output is recommended for the test signal of BVT-500P and for the reference input to the PAL test signal generator Tektronix Type 148.

Colour Bars Signal

Almost all the adjustments require the colour bars signal. It should have the following.

100% white
75% colour bars
75% red



(2) PAL Test Signal Generator: Tektronix Type 148

The model 148 generates the following signals that the alignment of BVT-500P requires.

Ramp Linearity
5 Steps Linearity
Multiburst
Line 17 Signal

The model 148 is operative only when genlocked. A separate PAL composite colour signal or a black burst signal is required to genlock the master oscillator inside the 148. Tektronix Type 145 PAL colour bars output is recommended for the reference signal.

(3) Video Sweep Generator

Sweep Range; 0 to 5 MHz
The alignments of "DO Pulse Generator" and "Beat Canceller" require the video sweep signal.

(4) Standard Signal Generator

Sine Wave; 1.3 MHz, 1.9 MHz and 5 MHz
The alignments of "DO Pulse Generator" and "Beat Canceller" require the sine wave signal.

(5) Oscilloscope with Probe Adaptor

Oscilloscope

Band Width: 100 MHz
TEKTRONIX Type 145 or Equivalent

Probe Adaptor

Probe Tip for Grounding
TEKTRONIX Part No. 013-0085-10

(6) PAL Vectorscope

TEKTRONIX Type 521A or Equivalent
The alignments of "Encoder" and "Chroma Output Level" require the vectorscope.

(7) PAL Waveform Monitor

TEKTRONIX Type 1485C or Equivalent
The "Frequency Response Alignment" requires the waveform monitor.

(8) PAL Picture Monitor

(9) Frequency Counter

The alignments of "Video Output Amplifier" and "Beat Canceller" require a frequency counter.

(10) Digital DC Voltmeter

Having accuracy of three digits below decimal point or better.
The "Power Supply Alignment" requires the digital dc voltmeter.

(11) Video Tape Recorder

Sony BVU-200P
The DUB output signal in E-to-E mode of BVU-200P is used for the following.

12. APC Alignment
13. DUB IN Chroma Level Alignment
14. Pilot/Burst Separator Alignment
15-1. Burst Lock Osc. Sampling Pulse Gen. Adj.
16-1. Pilot Blanking Adjustment
24. Noise Canceller Alignment

(12) IC Test Clip

Option

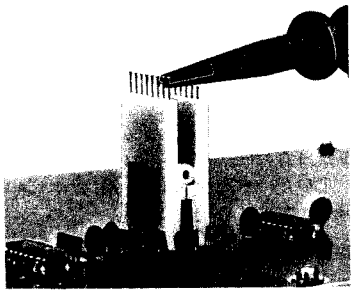
Type TC-16; Sony Part No. J-6041-770-A

Type TC-20; Sony Part No. J-6041-780-A

Manufacturer;

AP·PRODUCTS INCORPORATED
Box 697 72 Corwin Drive
Painesville, Ohio 44077, USA
TEL; 216-354-2101

When connecting the test probe to the terminal of DIP integrated circuit, these clips are convenient. Type TC-16 is for DIP 14-pin or 16-pin IC and Type TC-20 is for 18-pin or 20-pin IC.



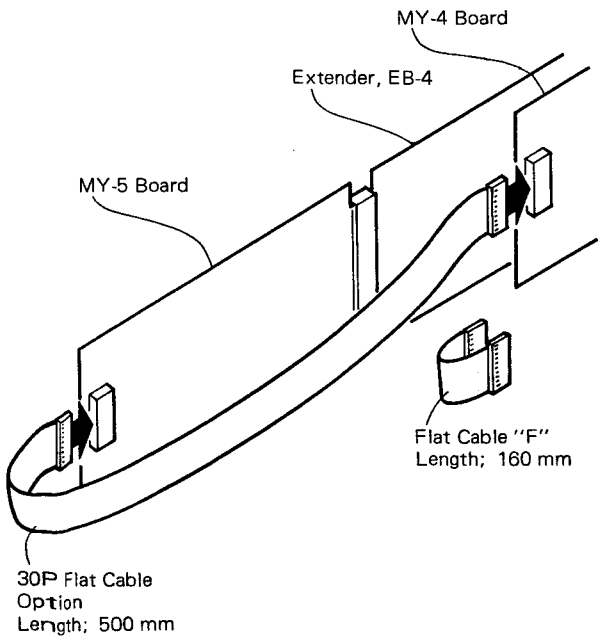
(13) Extender, EB-4 Sony Part No. A-6252-032-A

This extender is for main circuit boards and BVT-500P is equipped with one piece as an accessory.

(14) 30P Flat Cable Sony Part No. J-6041-590-A

Option

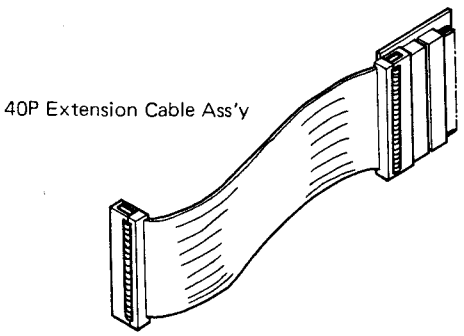
The circuit boards "MY-4" and "MY-5" is connected with the 30-pin flat cable "F". This option is its long cable.

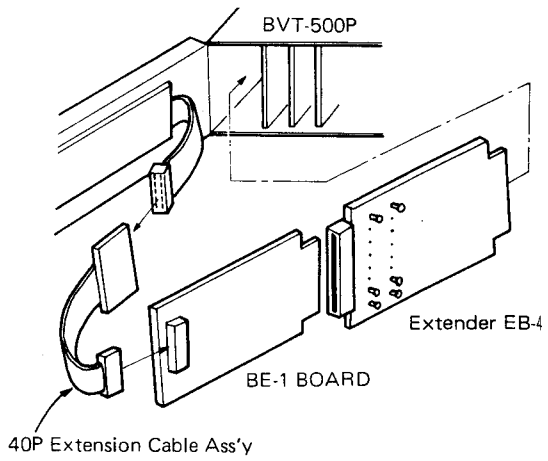


(15) 40P Extension Cable Ass'y Sony Part No. J-6041-720-A

Option

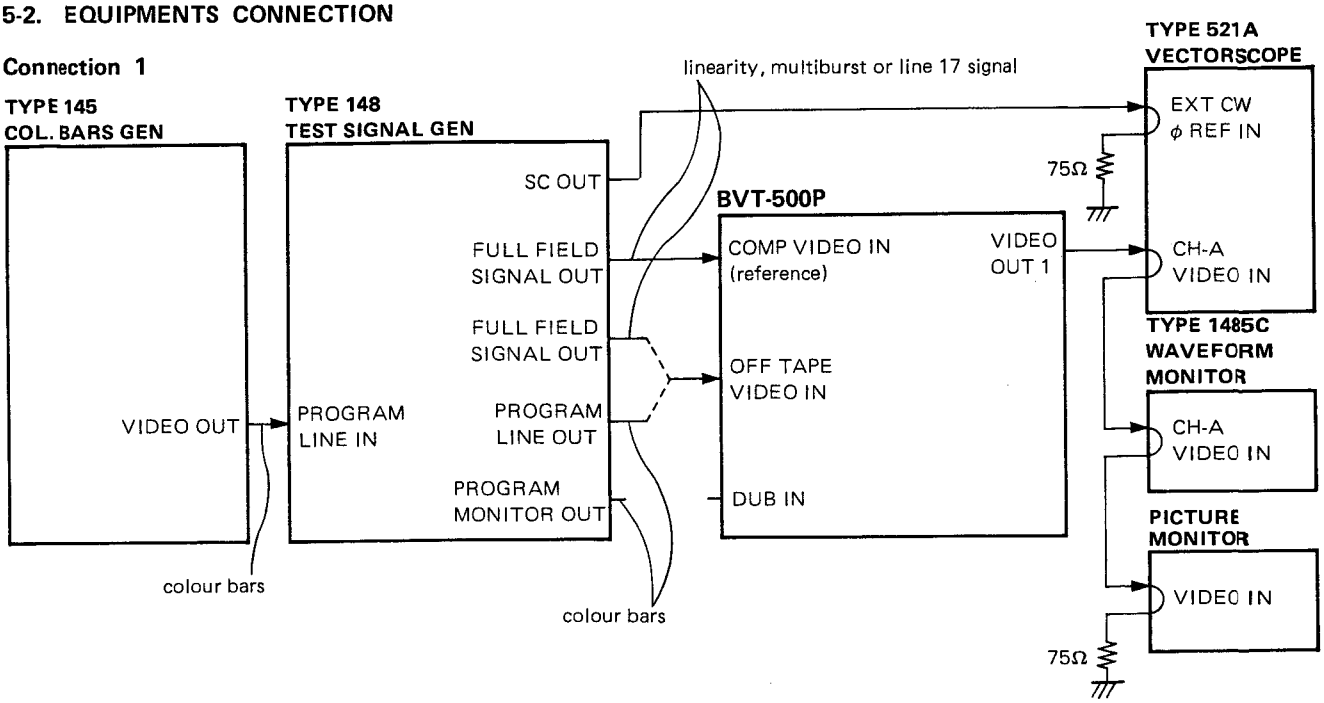
The circuit board "BE-1" is connected to front panel (ST-10 board) via 40-pin flat cable. This option is its extender and is required by the check/adjustment of BE-1 board.



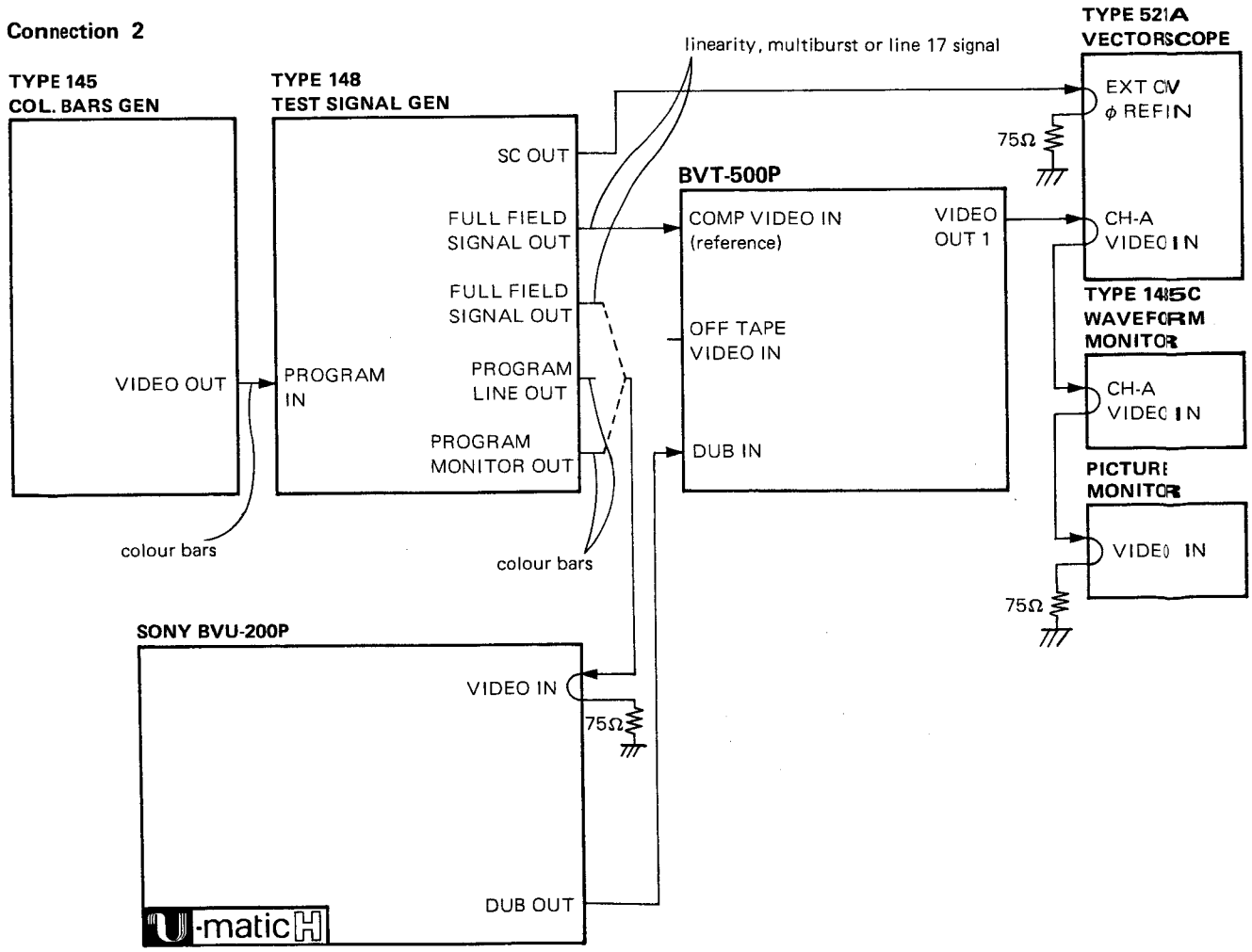


5-2. EQUIPMENTS CONNECTION

Connection 1



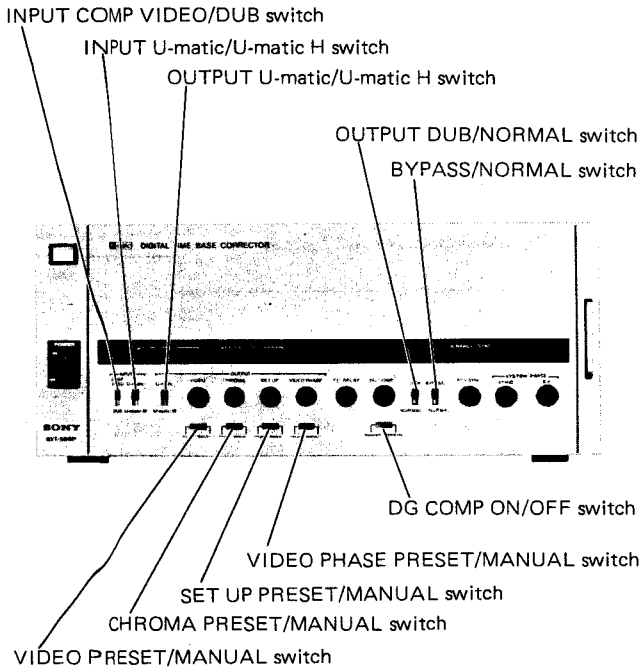
Connection 2



5-3. INITIAL SETTING OF BVT-500P

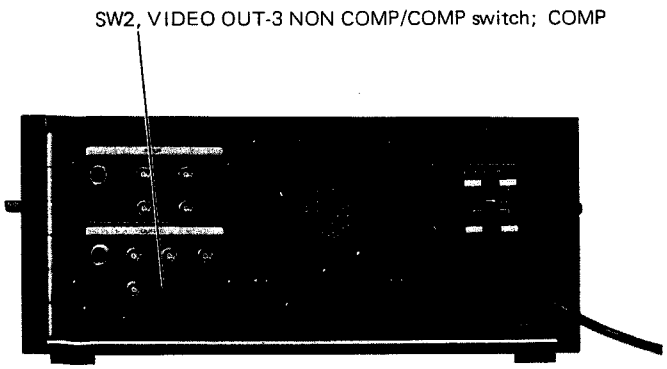
Control Panel (ST-10 Board)

SW1, INPUT COMPOSITE VIDEO/DUB switch ; COMP VIDEO
SW2, INPUT U-matic/U-matic H switch ; U-matic H
SW3, OUTPUT U-matic/U-matic H switch ; U-matic H
SW4, OUTPUT VIDEO level PRESET/MANUAL switch ; PRESET
SW5, OUTPUT CHROMA level PRESET/MANUAL switch ; PRESET
SW6, OUTPUT SET UP level PRESET/MANUAL switch ; PRESET
SW7, OUTPUT VIDEO PHASE PRESET/MANUAL switch ; PRESET
SW8, OUTPUT DG COMPENSATION ON/OFF switch ; ON
SW9, OUTPUT DUB/NORMAL switch ; NORMAL
SW10, BYPASS/NORMAL switch ; NORMAL



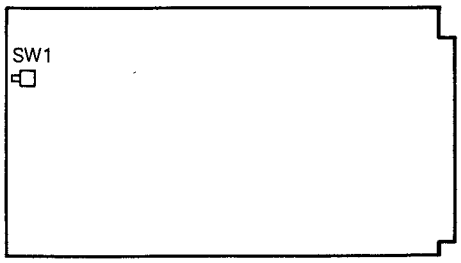
Connector Panel

SW2, VIDEO OUT-3 NON COMP/COMP switch; COMP



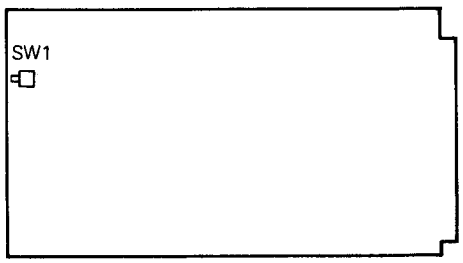
⑯ IO-3 Board

SW1, INPUT LEVEL PRESET/MANUAL switch; PRESET



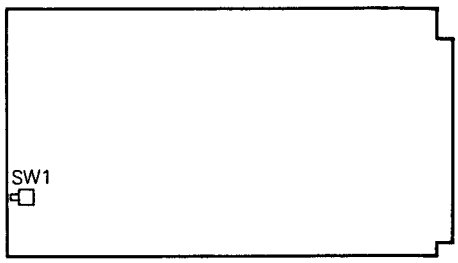
⑭ AP-1 Board

SW1, INERTIA 32-LINE/64-LINE switch; 32



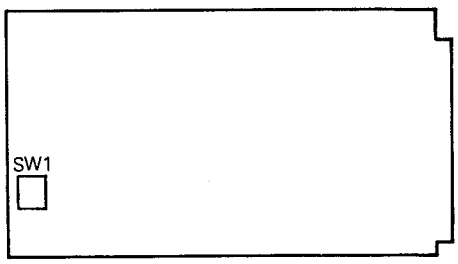
⑥ MY-4 Board

SW1, CHROMA LINE ADD ON/OFF switch; OFF



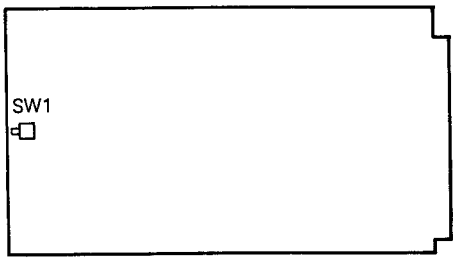
⑤ MY-5 Board

SW1, Y/C DELAY coarse adj. switch; position 5 or 6



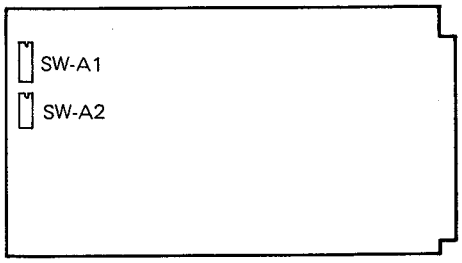
④ DA-5 Board

SW1, NOISE CANCELLER ON/OFF switch; OFF



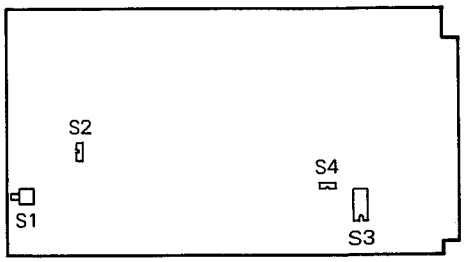
③ SG-21 Board

SW-A1, V BLKG Line Select switch; all channels ON
SW-A2, V BLKG Line Select switch; all channels ON



① BE-1 Board

S1, BEAT CANCELLER ON/OFF switch; OFF
S2, test switch; channel-1; ON
channel-2; OFF
S3, DL tap select switch; either one channel; ON
other seven channels; OFF
(selected at factory)
S4, test switch; channel-1; ON
channel-2; OFF



SECTION 6
DC POWER SUPPLY ALIGNMENT

Note: In ±12 V adjustments (Steps 2 & 3) and ±5 V adjustments (Steps 4 & 5), adjusting the + sides (+12 V & +5 V) will affect − sides (−12 V & −5 V) so that −12 V and −5 V adjustments are required.

Connection; No connection to TBC is required.

Equipment; Digital DC Voltmeter

Step 1. Use of Extender "EB-4"
Insert the extender "EB-4" into the spare board connector (No. 10 or 11) of equipment housing.

Step 2. +12 V Adjustment
Spec; +12.00 ± 0.01 Vdc at Extender pin-3
PW-43 Board ⊘VR3

Step 3. −12V Adjustment
Spec; −12.00 ± 0.01 Vdc at Extender pin-4
PW-43 Board ⊘VR4

Step 4. +5 V Adjustment
Spec; +5.00 ± 0.01 Vdc at Extender pin-48
PW-43 Board ⊘VR1

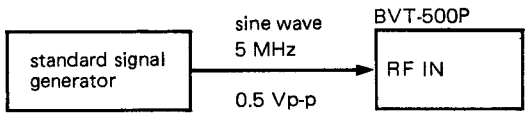
Step 5. −5 V Adjustment
Spec; −5.00 ± 0.01 Vdc at Extender pin-46
PW-43 Board ⊘VR2

PW-43 board (upper view)

SECTION 7
DROPOUT PULSE GENERATOR ALIGNMENT

7-1. RF AGC LEVEL ADJUSTMENT

Connection;



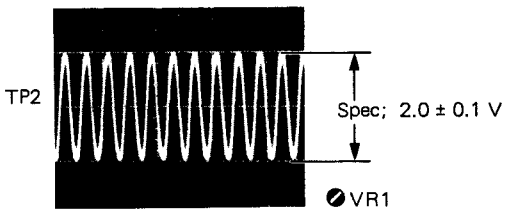
Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

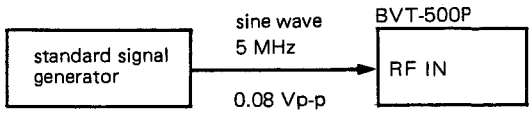
Step 1. Setting of Signal Generator
Frequency; 5 MHz
Level; 0.5 Vp-p
(can be measured at TP1 on DO-10 board also.)

Step 2. Adjustment
DO-10 Board



7-2. RF DO KILLER ADJUSTMENT

Connection;



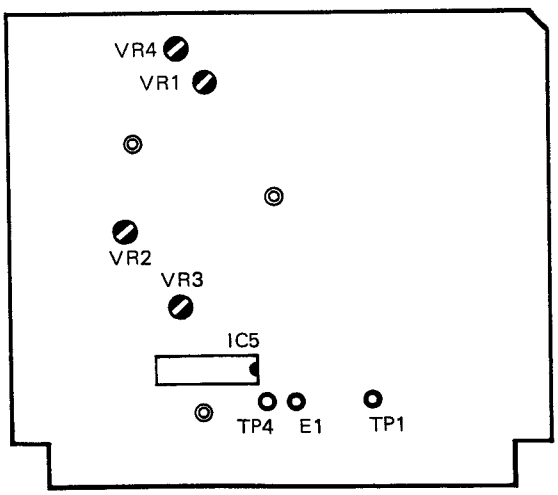
Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Step 1. Setting of Signal Generator
Frequency; 5 MHz
Level; 0.08 Vp-p
(can be measured at TP1 on DO-10 board also.)

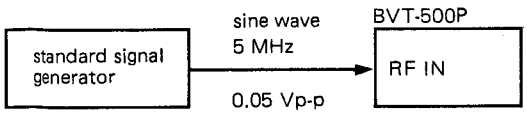
Step 2. Adjustment
DO-10 Board, at IC5, pin 1
VR3
Turn VR3 fully counterclockwise. Then start turning VR3 gently clockwise and stop turning VR3 at the point where:
DC level is jumped from HIGH level (approx. 5 Vdc) to LOW level (approx. 0 Vdc).



DO-10 board (component side)

7-3. DO LEVEL SENSITIVITY ADJUSTMENT

Connection;



Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

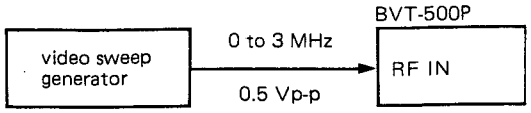
Equipment; Oscilloscope

Step 1. Setting of Signal Generator
Frequency; 5 MHz
Level; 0.05 Vp-p
(can be measured at TP1 on DO-10 board also.)

Step 2. Adjustment
DO-10 Board, at IC5, pin 2
⊘VR2
Turn VR2 fully ↺ counterclockwise. Then start turning VR2 gently ↻ clockwise and stop turning VR2 at the point where:
DC level is jumped from LOW level (approx. 0 Vdc) to HIGH level (approx. 5 Vdc).

7-4. DO WIDTH SENSITIVITY ADJUSTMENT

Connection;



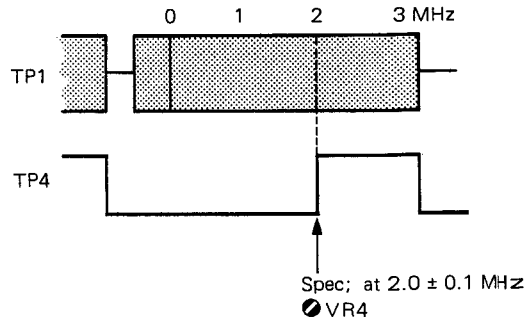
Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Dual Trace; CHOP
Trigger; DO-10 Board TP4

Step 1. Setting of Sweep Generator
Sweep Range; 0 to 3 MHz
Level; 0.5 Vp-p
(can be measured at TP1 on DO-10 board.)

Step 2. Adjustment
DO-10 Board



SECTION 8
SYNC GENERATOR ALIGNMENT

8-1. 5.06 MHz VCO ADJUSTMENT

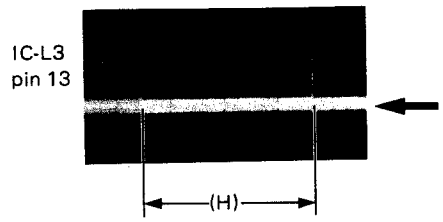
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches and Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Input Coupling; DC

Spec. & Adj.
SG-21 Board



Spec; 0.50 ± 0.05 Vdc
⊘VL1

8-2. 8.00 MHz VCO ADJUSTMENT

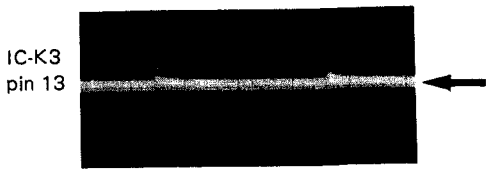
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

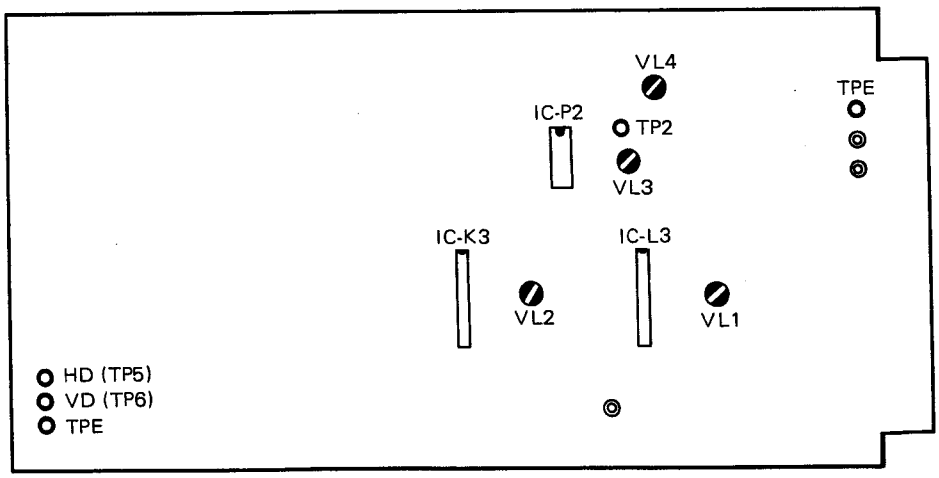
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Input Coupling; DC

Spec. & Adj.
SG-21 Board



Spec; 0.50 ± 0.05 Vdc
⊘VL2



SG-21 board (component side)

8-3. BURST TUNING

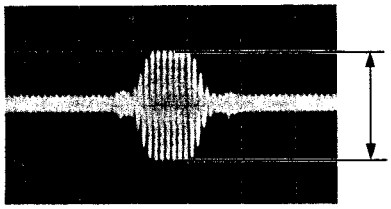
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
SG-21 Board



Maximize the amplitude.
Spec; ≧ 0.75 V
⊘VL3

8-4. 17.73 MHz VCO ADJUSTMENT

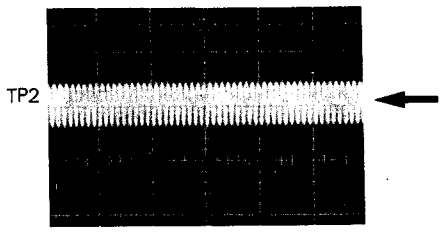
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Input Coupling; DC

Spec. & Adj.
SG-21 Board



Spec; 0.50 ± 0.05 Vdc
⊘VL4

SECTION 9
VIDEO INPUT AMPLIFIER ALIGNMENT

9-1. VIDEO INPUT LEVEL PRESET CALIBRATION

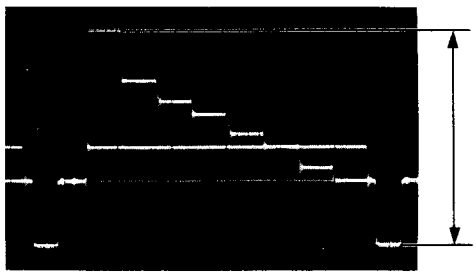
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

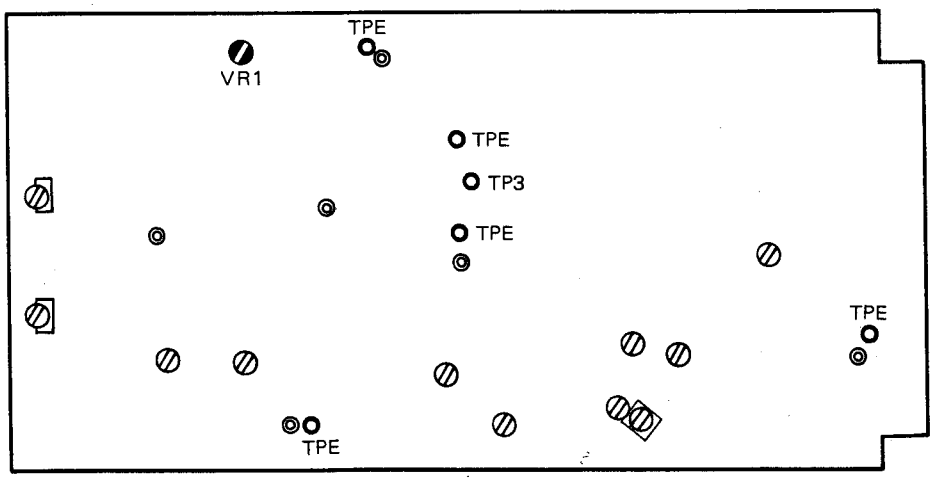
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board



Spec; 2.0 ± 0.05 V
VR1



IO-3 board (component side)

SECTION 10
SYNC SEPARATOR ALIGNMENT

10-1. PB SYNC WIDTH ADJUSTMENT

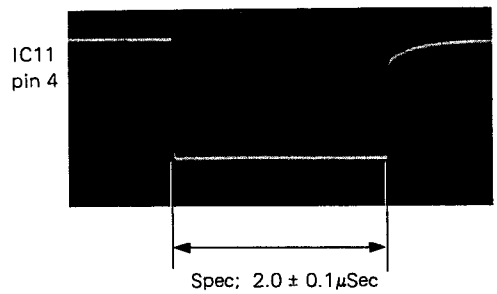
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
SS-12 Board



Spec; 2.0 ± 0.1μSec
⊘VR1

10-2. PB-V DETECTION LEVEL ADJUSTMENT

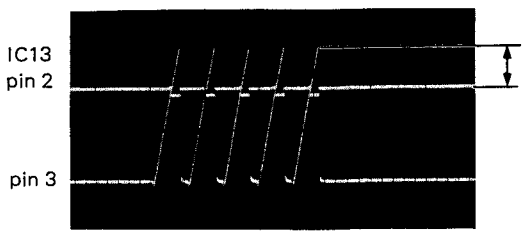
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

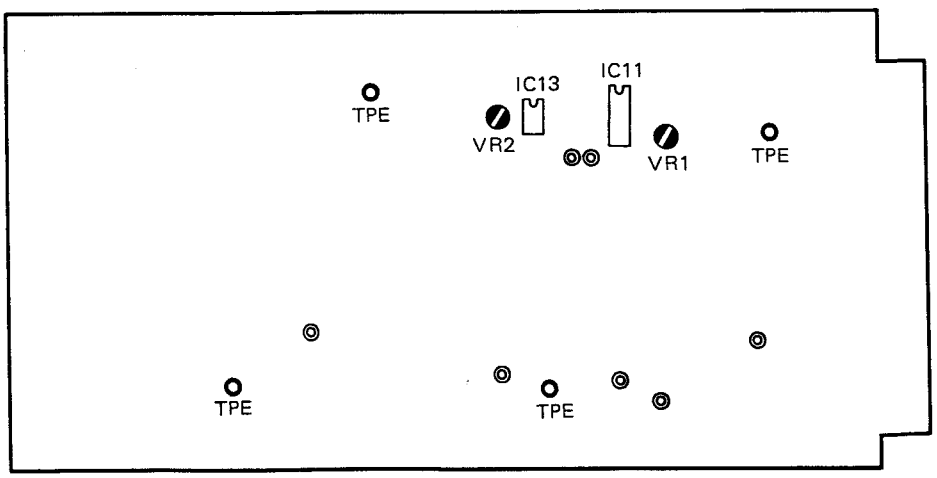
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Dual Trace
Input Coupling; DC
Trigger; VD (TP6/SG-21), Slope; –

Spec. & Adj.
SS-12 Board



Spec; 0.15 ± 0.02 Vdc
⊘VR2



SS-12 board (component side)

SECTION 11
CLOCK GENERATOR ALIGNMENT

11-1. 16 MHz VCO ADJUSTMENT

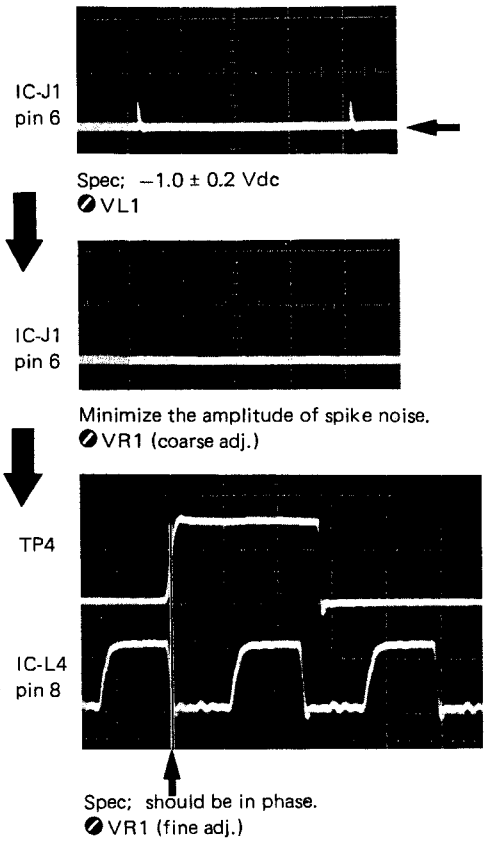
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
CK-4 Board



11-2. WINDOW ADJUSTMENT

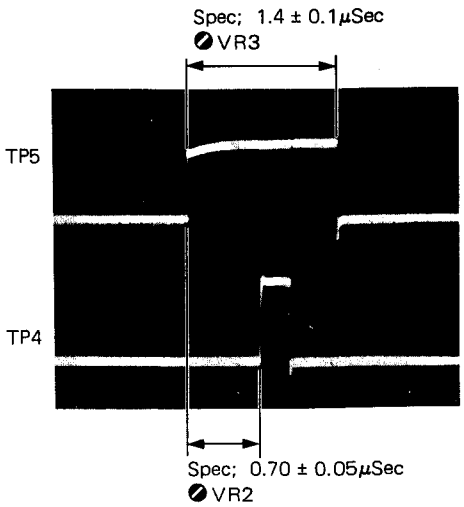
Connection; Same as Section 5-2, Connection 1

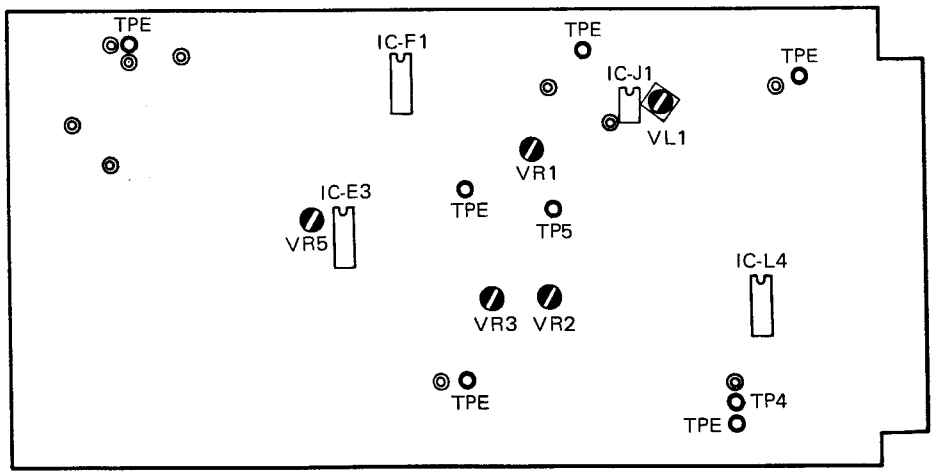
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
CK-4 Board





CK-4 board (component side)

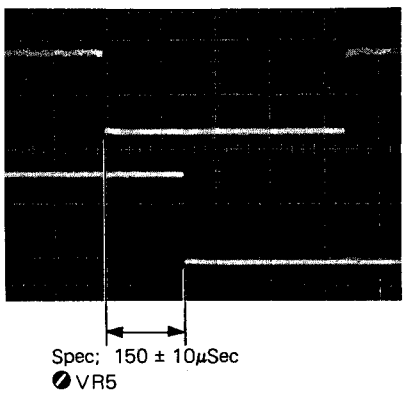
11-3. SKEW GUARD POINT ADJUSTMENT

Connection; Same as Section 5-2, Connection 1, Except the following
Disconnect the OFF TAPE VIDEO input.

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
CK-4 Board



Spec; 150 ± 10μSec
VR5

SECTION 12
APC ALIGNMENT

12-1. AFC VCO ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

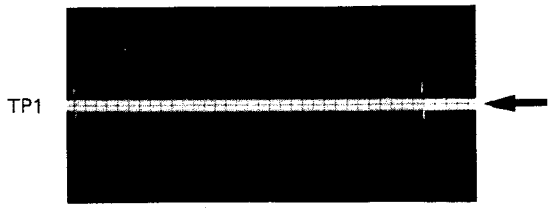
Input Signal (BVU-200P, VIDEO IN);
Colour Bars

Mode of VTR; E-to-E

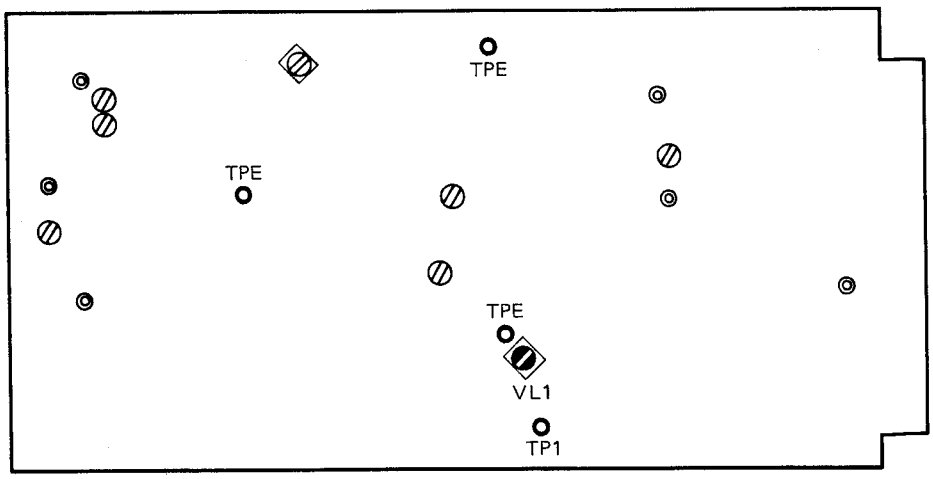
Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

Equipment; Oscilloscope
Input Coupling; DC

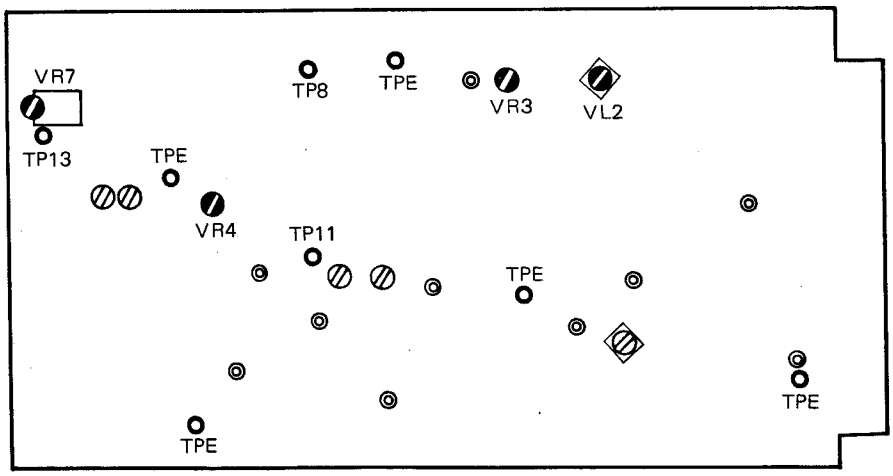
Spec. & Adj.
UI-3 Board



Spec; 0.00 ± 0.05 Vdc
VL1



UI-3 board (component side)



AP-1 board (component side)

12-2. APC ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

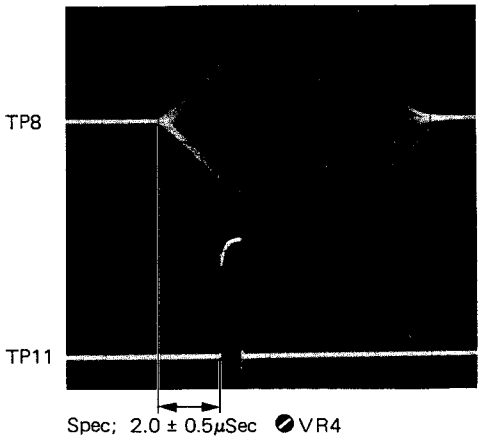
Input Signal (BVU-200P, VIDEO IN);
Colour Bars

Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

Equipment; Oscilloscope
Dual Trace; CHOP
Trigger; HD (TP5/SG-21), Slope; –

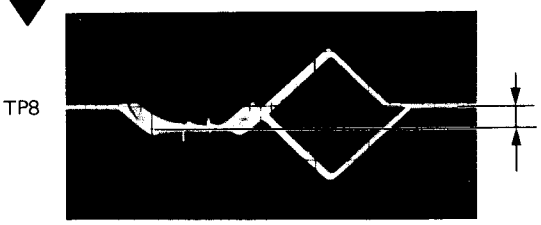
Spec. & Adj.
AP-1 Board



Spec; 2.0 ± 0.5μSec ⊘VR4 (coarse adj.)

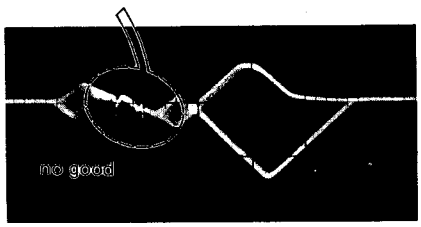
Spec; TP13 = 0 ± 0.05 Vdc ⊘VR7

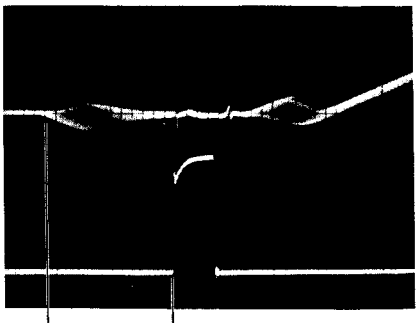
Set ⊘VR3 at its mechanical centre.



Spec; 0 ± 0.2 V ⊘VL2

should not slope.





Spec; 2.2 ± 0.4μSec ⊘VR4 (fine adj.)

SECTION 13
DUB-IN CHROMA FREQ. CONVERTER ALIGNMENT

13-1 CARRIER NULL ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

Input Signal (BVU-200P, VIDEO IN);
Colour Bars

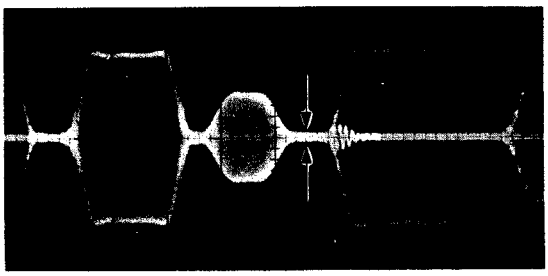
Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

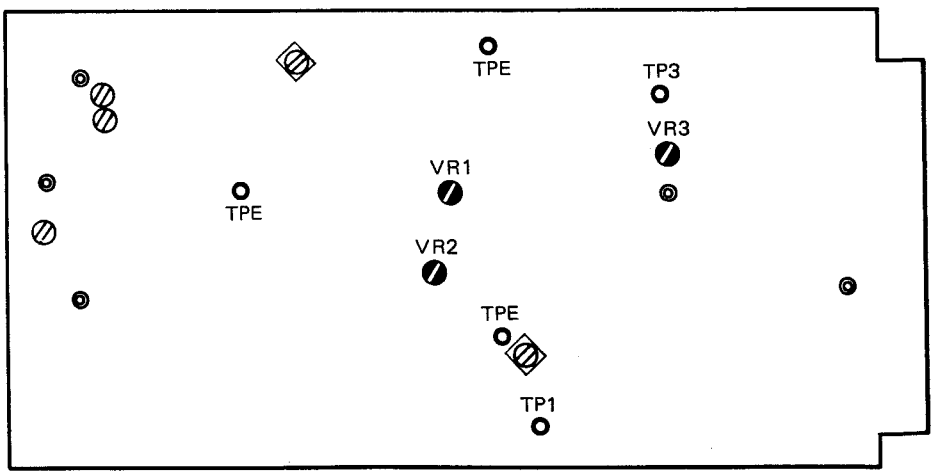
Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
UI-3 Board

TP3



Spec; Minimize the level at specified portion.
(≦ 30 mVpp)
⊘VR1 ⊘VR2



UI-3 board (component side)

13-2. CHROMA LEVEL ADJUSTMENT

Connection; Same as Sec. 5-2 Connection 2, and moreover: connect "PROGRAM LINE OUT" of test signal generator Type 148 to "OFF TAPE VIDEO IN".

Input Signal (OFF TAPE VIDEO IN); Colour Bars

Input Signal (BVU-200P, VIDEO IN); Colour Bars

Mode of VTR; E-to-E

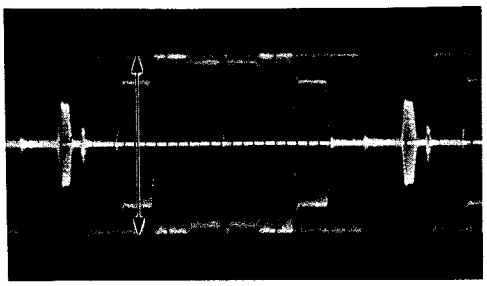
Switches & Controls Setting;
same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1. Composite Input Mode Chroma Level Measurment
Confirm that "INPUT COMPOSITE VIDEO/DUB" switch is set at "COMPOSITE" position.

UI-3 Board

TP3

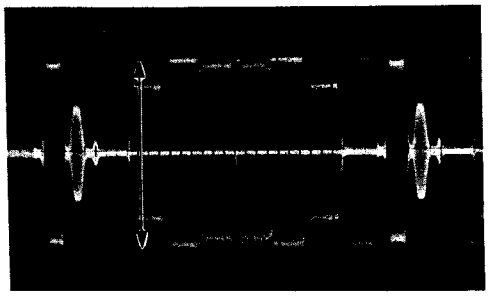


V_{COMP} (= 0.72 V; Red)

Step 2. Dub Input Mode Chroma Level Adjustment
Set "INPUT COMPOSITE VIDEO/DUB" switch at "DUB" position.

UI-3 Board

TP3



Spec; $V_{DUB} = V_{COMP} \pm 0.02$ V
⊘VR3

SECTION 14
PILOT & BURST SEPARATOR ALIGNMENT

14-1. GATE PULSE WIDTH ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

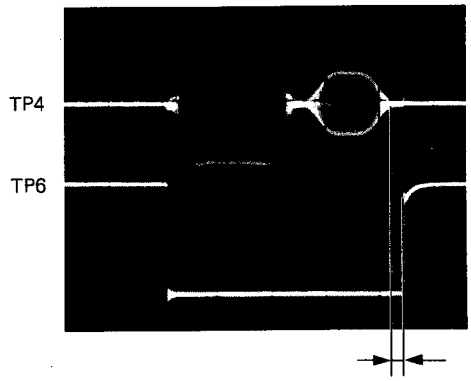
Input Signal (BVU-200P, VIDEO IN);
Colour Bars

Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
UI-3 Board



Spec; 1.0 ± 0.5μSec
VR6

14-2. 1 H DELAY LINE ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

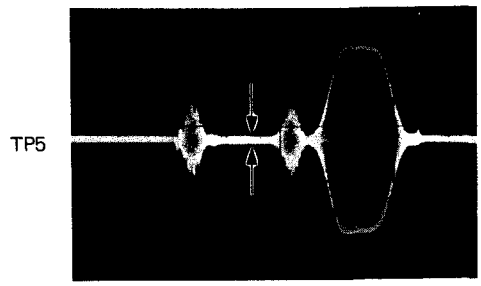
Input Signal (BVU-200P, VIDEO IN);
Colour Bars

Mode of VTR; E-to-E

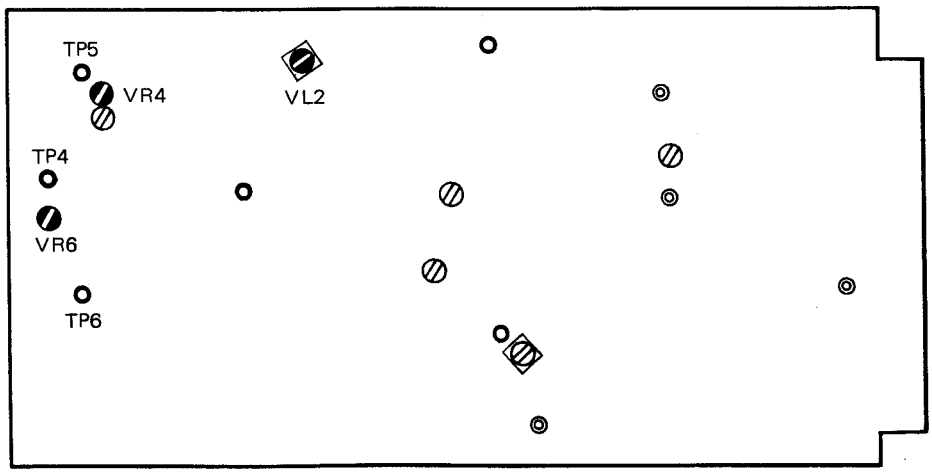
Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
UI-3 Board



Minimize the amplitude.
VL2 VR4



UI-3 board (component side)

14-3. PILOT LEVEL ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

Input Signal (BVU-200P, VIDEO IN);
Colour Bars

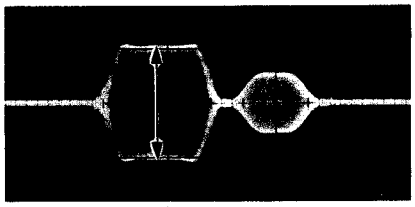
Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
UI-3 Board

TP4



Spec; 1.00 ± 0.05 V
VR5

SECTION 15
BURST LOCK OSCILLATOR ALIGNMENT

15-1. SAMPLING PULSE ADJUSTMENT

Connection; Same as Sec. 5-2 Connection 2, and moreover: connect "PROGRAM LINE OUT" of test signal generator Type 148 to "OFF TAPE VIDEO IN".

Input Signal (OFF TAPE VIDEO IN);

Input Signal (BVU-200P, VIDEO IN);
Colour Bars

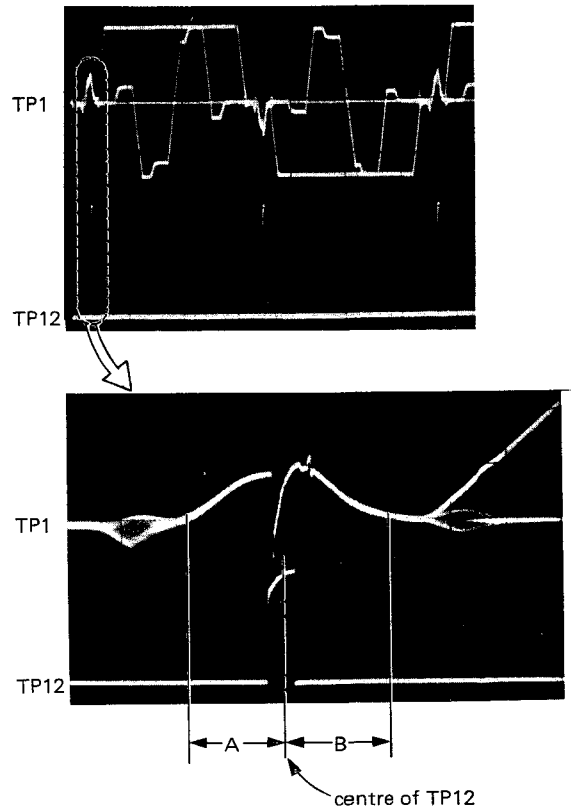
Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3

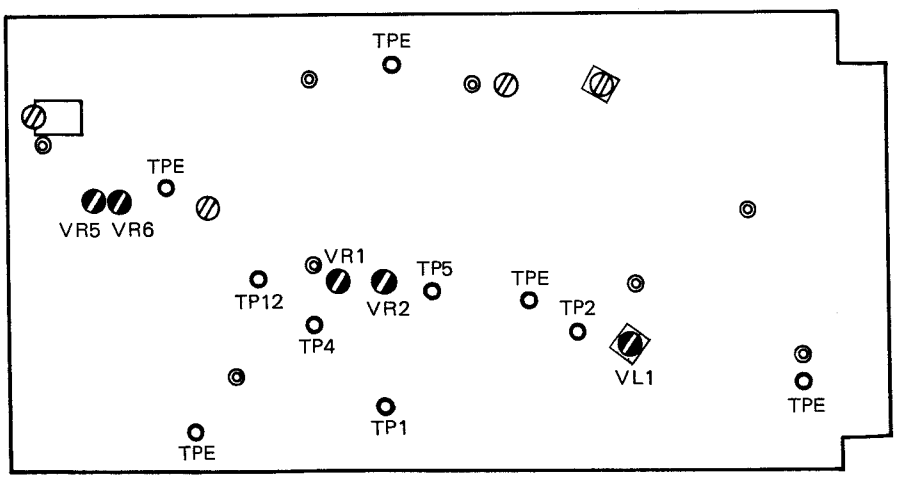
Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1. Composite Input Mode Adjustment
Confirm that "INPUT COMPOSITE VIDEO/DUB" switch is set at "COMPOSITE" position.

AP-1 Board



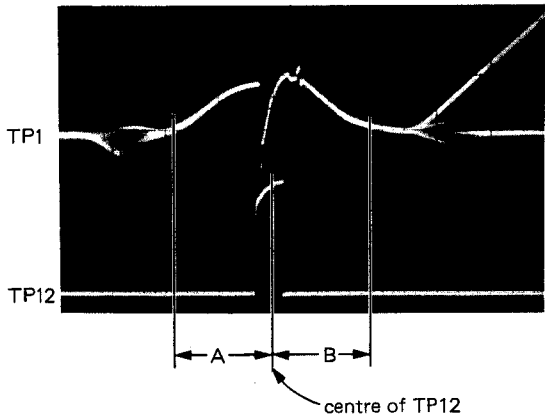
Spec; A = B
VR5



AP-1 board (component side)

Step 2. Dub Input Mode Adjustment
Set "INPUT COMPOSITE VIDEO/DUB" switch at "DUB" position.

AP-1 Board



Spec; A = B

● VR6

15-2. 4 Fsc VCO ADJUSTMENT

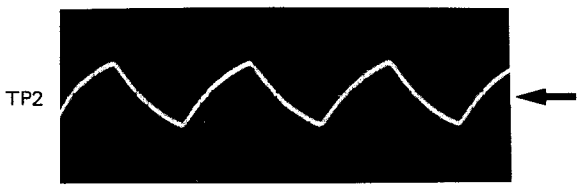
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
AP-1 Board



Spec; 0 ± 0.1 Vdc

● VL1

15-3. 1/2 FH TUNING ADJUSTMENT

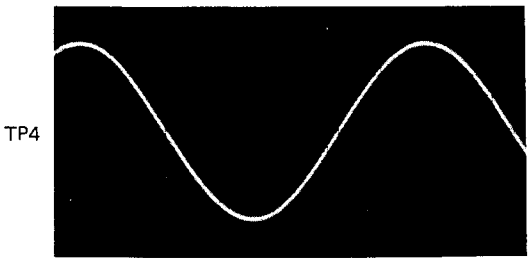
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
AP-1 Board



Spec; Maximize the amplitude. ($\geqq$6.0 Vpp)

● VR1

15-4. COLOUR MODE SIGNAL ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
AP-1 Board
Spec; TP5 = 0.50 ± 0.05 Vdc

● VR2

SECTION 16
CHROMA DECODER ALIGNMENT

16-1. PILOT BLANKING ADJUSTMENT

Connection; Same as Section 5-2, Connection 2

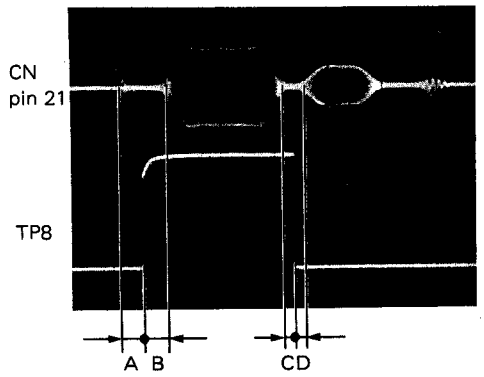
Input Signal (BVU-200P, VIDEO IN);
Colour Bars

Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3 except the following
Control Panel
INPUT COMP/DUB Switch; DUB

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DC-5 Board



Spec; A = B
VR5

Spec; C = D
VR6

16-2. PHASE MODULATION ADJUSTMENT

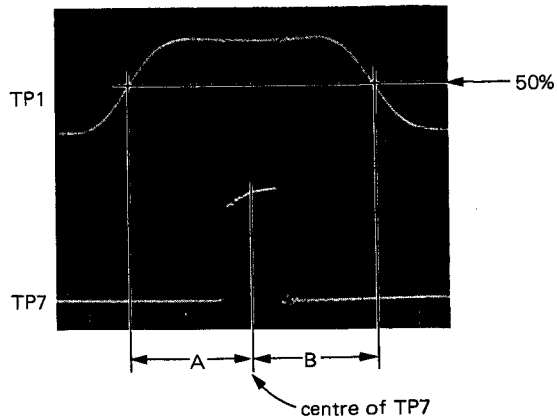
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

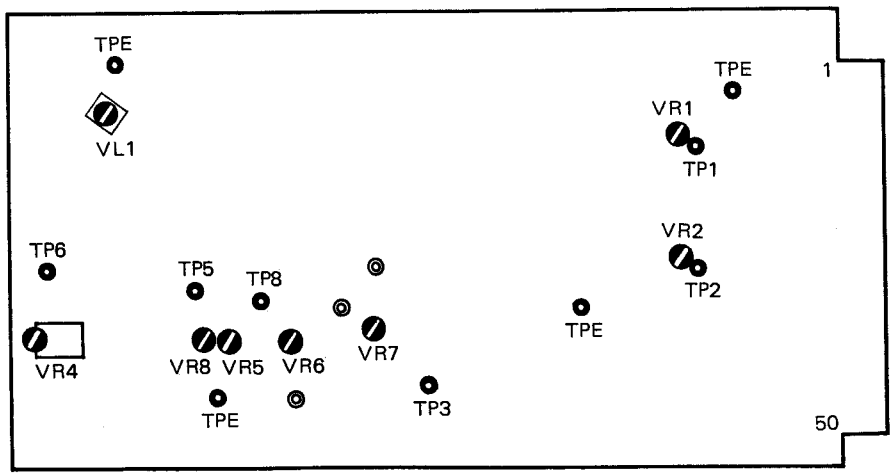
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DC-5 board



Spec; A = B
VR7



DC-5 board (component side)

16-3. DECODE CARRIER VCO ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope

Spec. & Adj.
DC-5 Board
Spec; TP6 = +4.0 ± 0.2 Vdc
⊘VL1

16-4. BURST/CHROMA DECODE CARRIER SELECT ADJUSTMENT

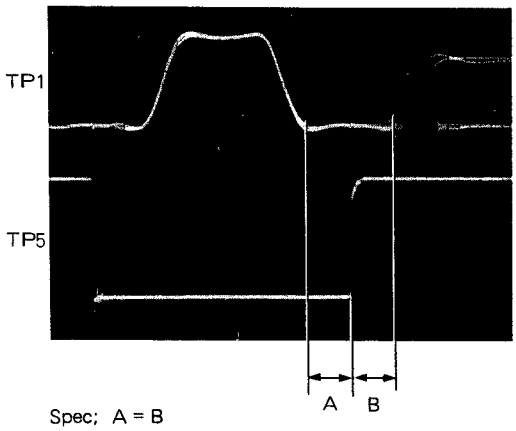
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DC-5 Board



Spec; A = B
⊘VR8

16-5. DECODE PHASE ADJUSTMENT

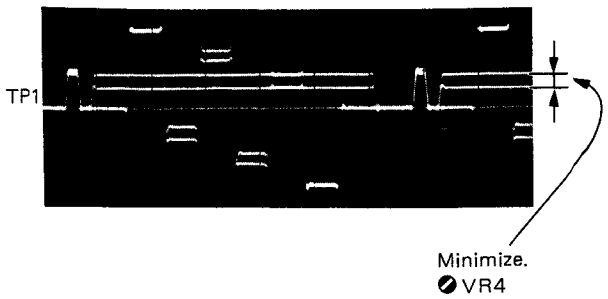
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DC-5 Board



16-6. DECODE OUTPUT LEVEL ADJUSTMENT

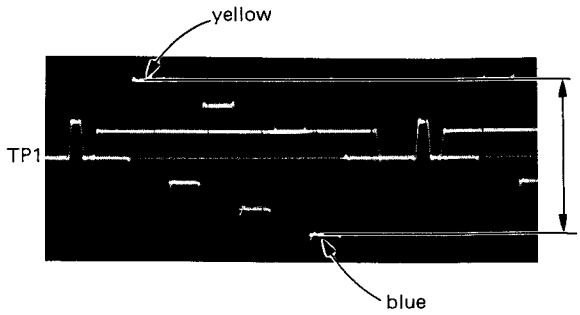
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

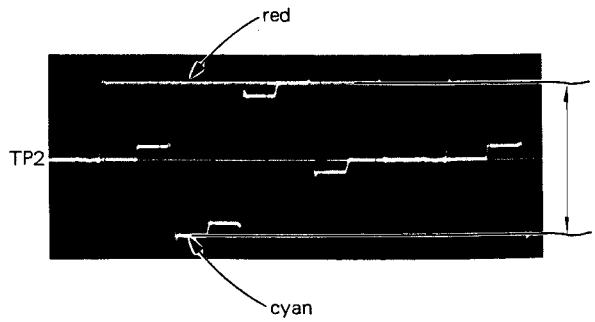
Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1. U-Axis (B-Y) Output Level Adj.
DC-5 Board



Spec; 1.50 ± 0.03 V
⊘VR1

Step 2. V-Axis (R-Y) Output Level Adj.
DC-5 Board



Spec; 1.50 ± 0.03 V
⊘VR2

SECTION 17
CHROMA A-D CONVERTER ALIGNMENT

17-1. DC BALANCE ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

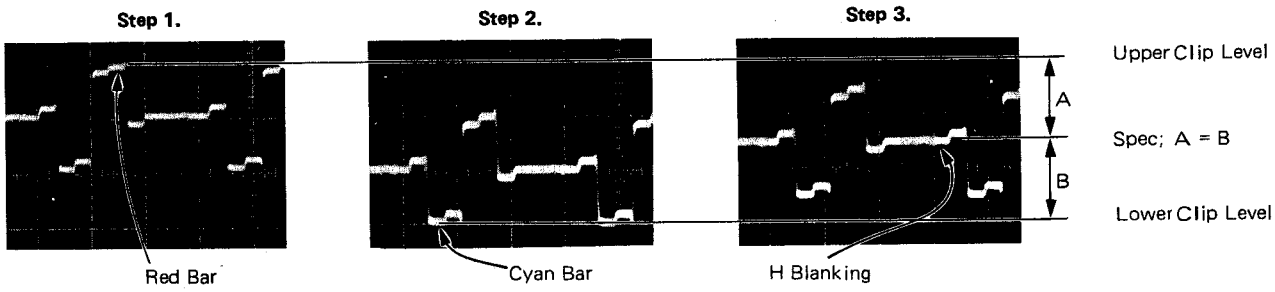
Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)
Input Coupling; DC

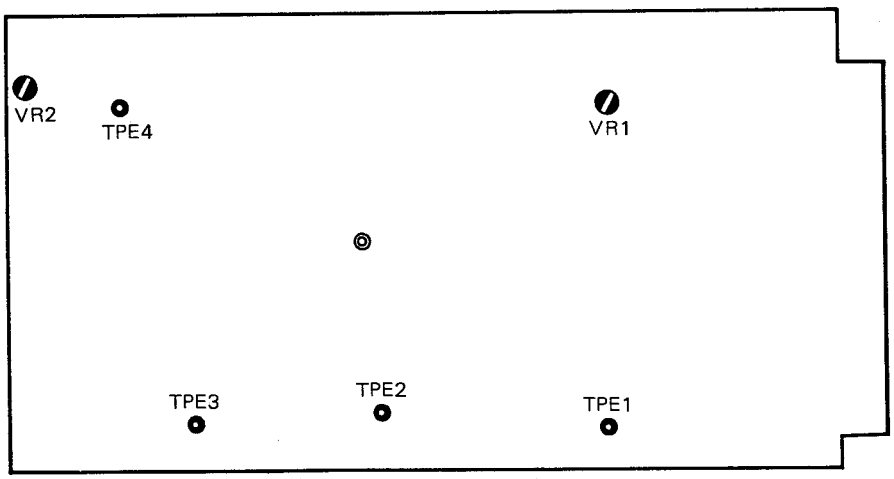
DA-5 Board TP5 (R-Y Signal)
AD-7 Board ⊘VR2

Step 1. Upper Clip Level
Set ⊘VR2 at its mechanical centre and then turn ⊘VR2 clockwise gently until the red bar portion is clipped.
Memorize the clip level: upper clip level.

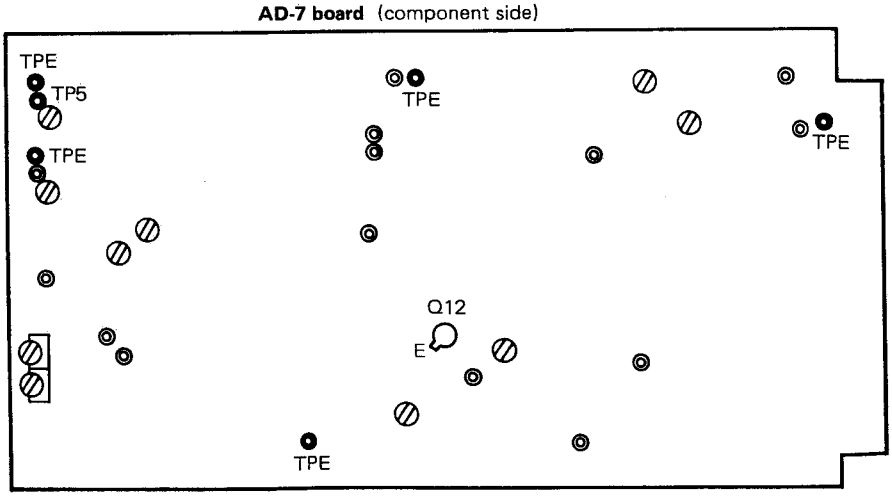
Step 2. Lower Clip Level
Turn ⊘VR2 counterclockwise until the cyan bar portion is clipped.
Memorize the clip level: lower clip level.

Step 3. Adjustment
Spec; H Blanking Level
= Centre between Upper & Lower Clip Level
⊘VR2





AD-7 board (component side)



DA-5 board (component side)

17-2. LINEARITY ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Ramp Linearity (Subcarrier OFF)

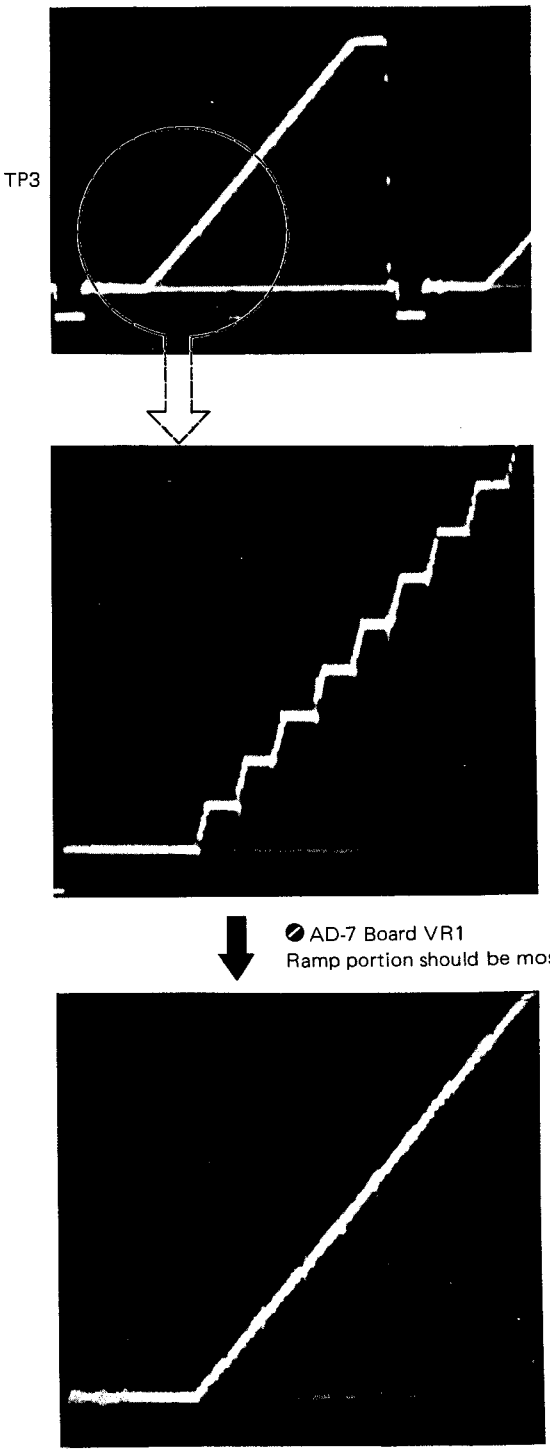
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1. Disconnect DC-5 board from BVT-500P.

Step 2. Short-circuit between:
AD-6 Board TP3 ⟷ AD-7 Board TP1

Step 3. Adjust as follows.
DA-5 Board



● AD-7 Board VR1
Ramp portion should be most linear.

Step 4. AD-7 Board VR3, 4, 5 & 6 Adjustment

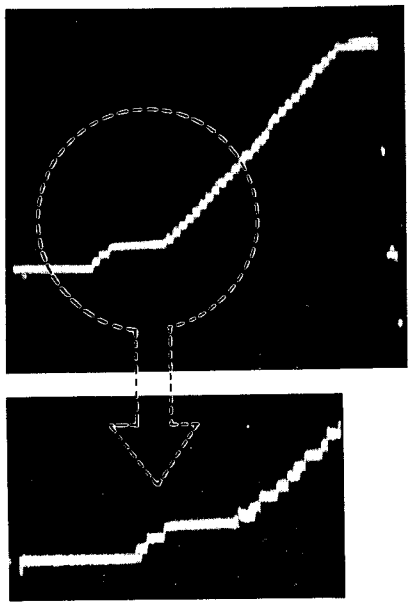
Caution 1; Don't readjust these variable resistors except when they are replaced with the new ones.

Caution 2; When these variable resistors are replaced with the new ones, readjust them as follows. Don't readjust the others.

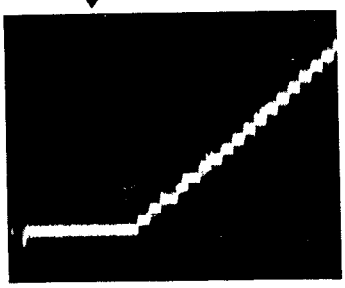
- VR3 → mechanical centre
- VR4 → mechanical centre
- VR5 → Adjust as follows.
- VR6 → Adjust as follows.

DA-5 Board, TP3

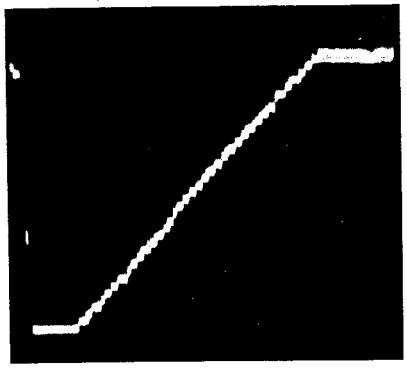
- VR5 → ↻ fully
- VR6 → mechanical centre



AD-7 Board VR5



Spec; Ramp portion should be most liner.
AD-7 Board VR5 VR6



Step 5. Remove the jumper between TP3 (AD-6) and TP1 (AD-7).
Re-install DC-5 Board.

SECTION 18
Y A-D CONVERTER ALIGNMENT

18-1. A-D CONVERTER INPUT LEVEL ADJUSTMENT

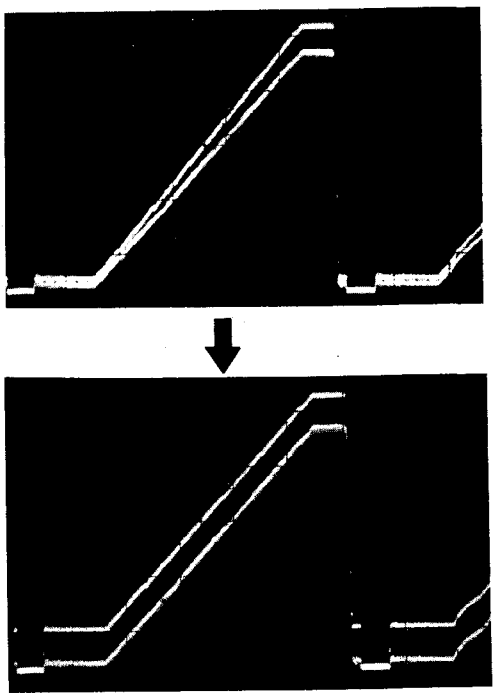
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Ramp Linearity (subcarrier; OFF)

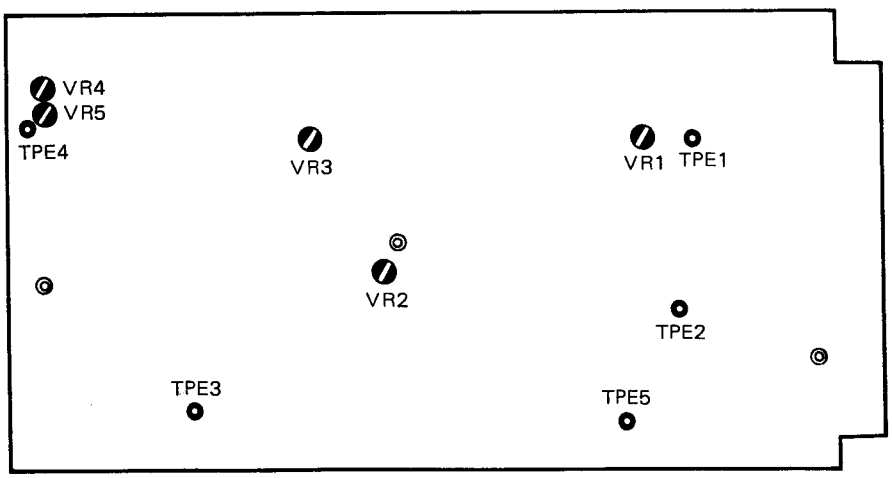
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DA-5 Board, Q12-Emitter



Spec; The slope of two waveforms should be equal.
AD-6 Board ⊘VR2



AD-6 board (component side)

18-2. DC BALANCE ADJUSTMENT

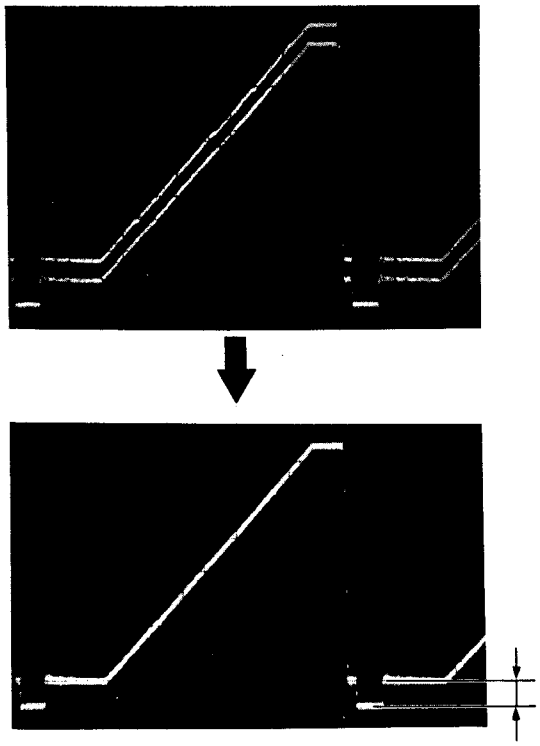
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Ramp Linearity (subcarrier; OFF)

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DA-5 Board, Q12-Emitter



Spec. 1. Two waveforms should be superposed on each other.
Spec. 2. Amplitude of Sync = 0.100 ± 0.005 V
AD-6 Board ⊘VR4 ⊘VR5

18-3. LINEARITY ADJUSTMENT

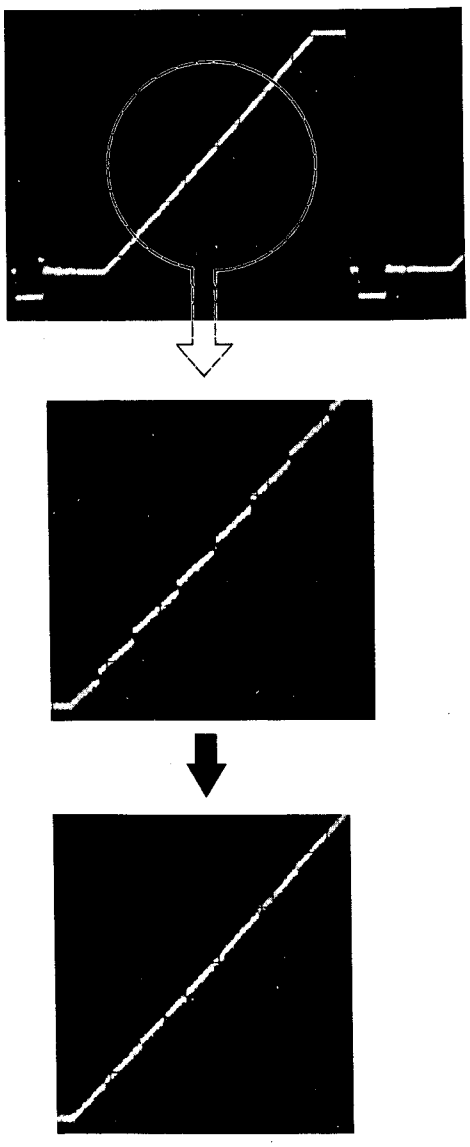
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Ramp Linearity (subcarrier; OFF)

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1.
DA-5 Board, Q12-Emitter



Spec; Ramp portion should be most linear.
AD-6 Board ⊘VR1 ⊘VR3

Step 2.

AD-6 Board VR6, 7, 8, 9, 10, 11, 12 & 13 Adjustment

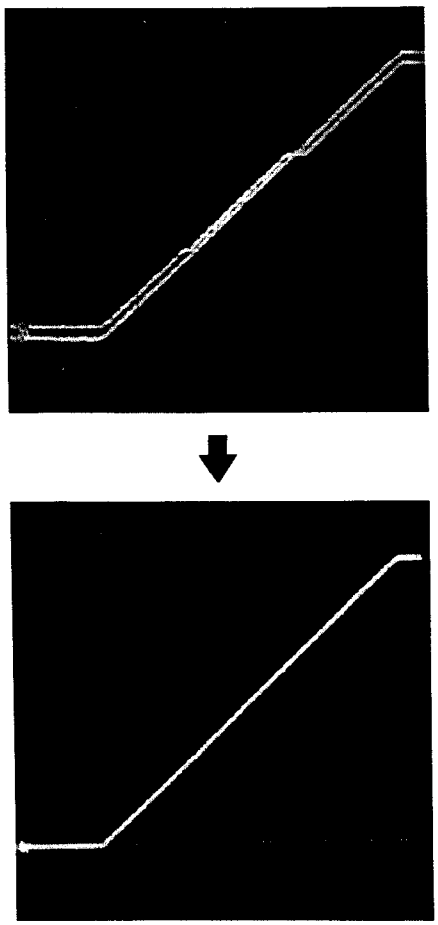
Caution 1; Don't readjust these variable resistors except when they are replaced with the new ones.

Caution 2; When these variable resistors are replaced with the new ones, readjust them as follows. Don't readjust the others.

- VR6 → mechanical centre
- VR7 → mechanical centre
- VR8 → Adjust as follows.
- VR9 → Adjust as follows.
- VR10 → mechanical centre
- VR11 → mechanical centre
- VR12 → Adjust as follows.
- VR13 → Adjust as follows.

DA-5 Board, Q12-Emitter

- VR8, 9, 12 & 13 → mechanical centre



Spec; Ramp portion should be most liner

AD-6 Board VR8 VR9 VR12 VR13

SECTION 19
D-A CONVERTER ALIGNMENT

19-1. SET UP LEVEL ADJUSTMENT

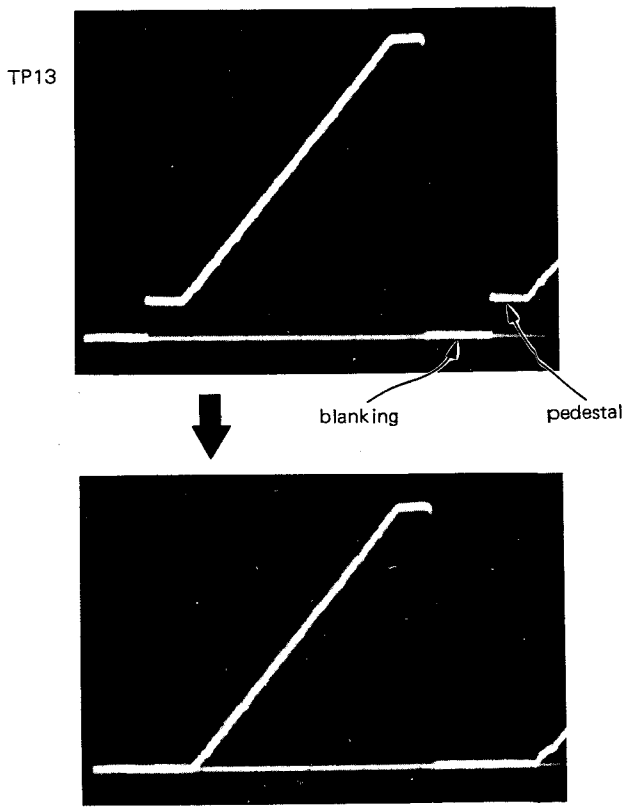
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Ramp Linearity (subcarrier; OFF)

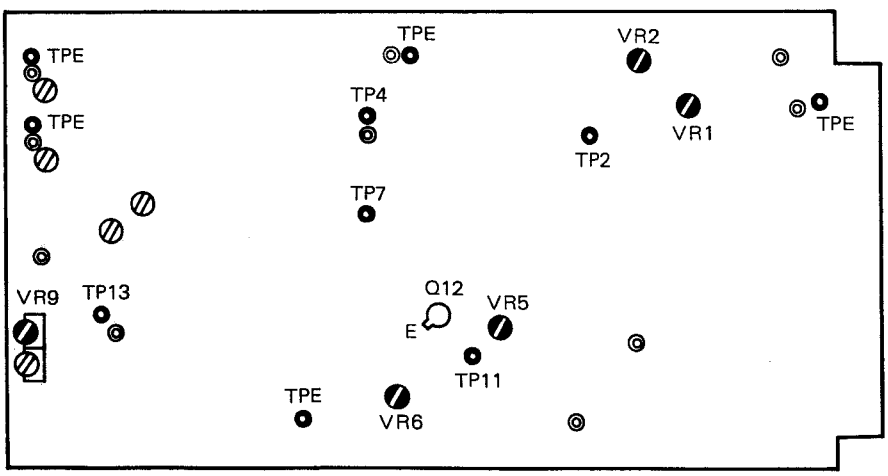
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DA-5 Board



Spec; blanking level = pedestal level
VR9



DA-5 board (component side)

19-2. D-A CONVERTER Y GAIN ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

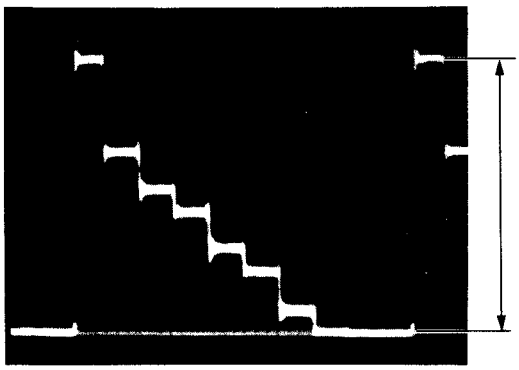
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DA-5 Board

TP13



Spec; 1.00 ± 0.05 V
VR5

19-3. DG CONTROL SIGNAL ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

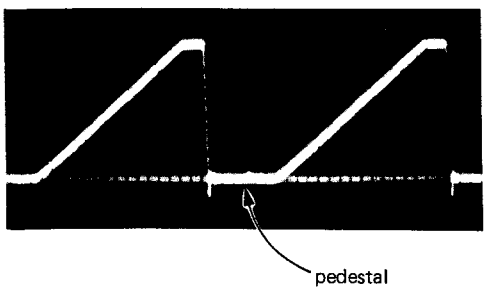
Input Signal (OFF TAPE VIDEO IN);
Ramp Linearity

Switches & Controls Setting;
Same as Section 5-3

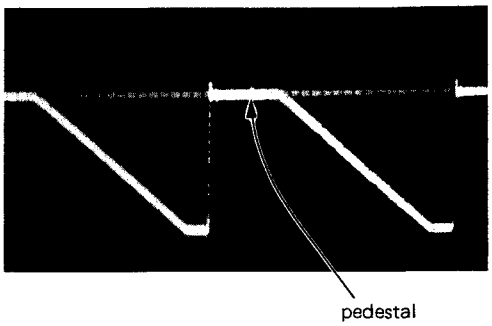
Equipment; Oscilloscope
Input Coupling; DC
Trigger; HD (TP5/SG-21)

Spec. & Adj.
DA-5 Board
TP11

When DG COMP control on the control panel is turned fully ↺:



When DG COMP control on the control panel is turned fully ↻:



Spec; pedestal level = 0 Vdc
VR6

19-4. Y/C DELAY CONTROL CALIBRATION

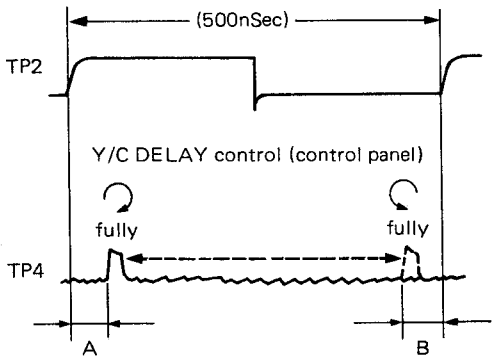
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

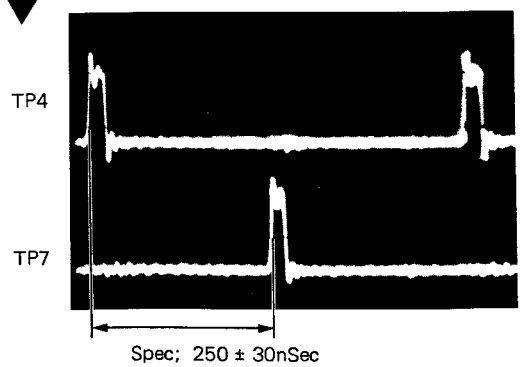
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; TP2/DA-5

Spec. & Adj.
DA-5 Board



Spec; 30≦ A ≦100nSec
30≦ B ≦100nSec
VR1



Spec; 250 ± 30nSec
VR2

SECTION 20
ENCODER ALIGNMENT

20-1. 4 Fsc TUNING

Connection; Same as Section 5-2, Connection 1

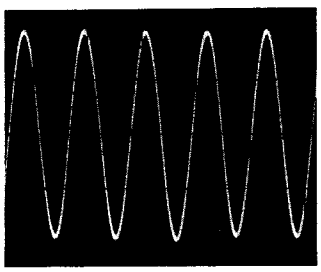
Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3

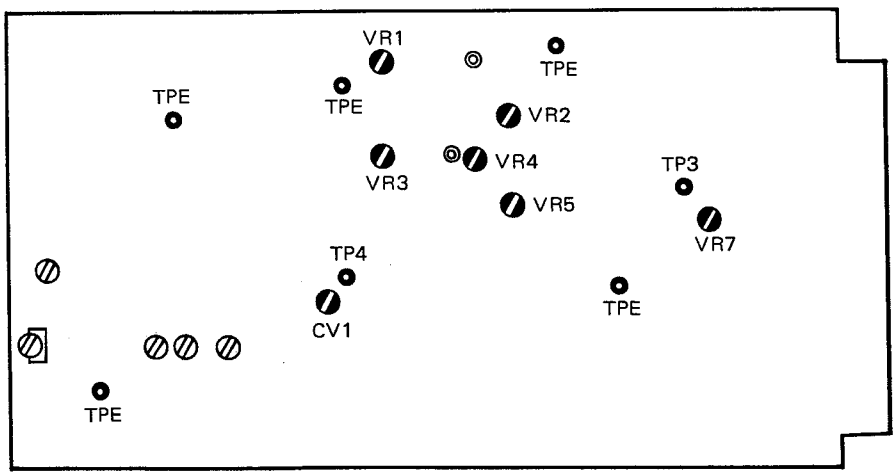
Equipment; Oscilloscope

Spec. & Adj.
EN-7 Board

TP4



Maximize the amplitude (0.3 to 0.4 Vpp)
● CV1



EN-7 board (component side)

20-2. CARRIER BALANCE & DC OFFSET ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

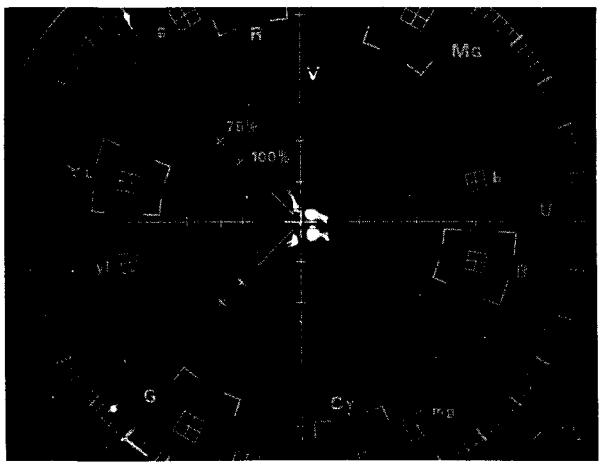
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

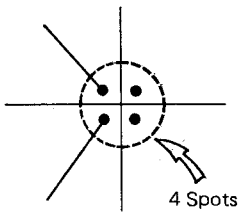
Switches & Controls Setting;
Same as Section 5-3

Equipment; Vectorscope
Mode; Vector, PAL

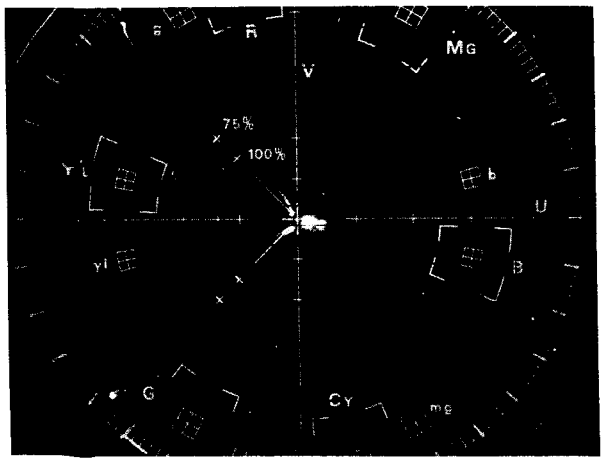
VIDEO OUT (CONNECTOR PANEL)

Step 1. The four spots will be observed around the screen centre.

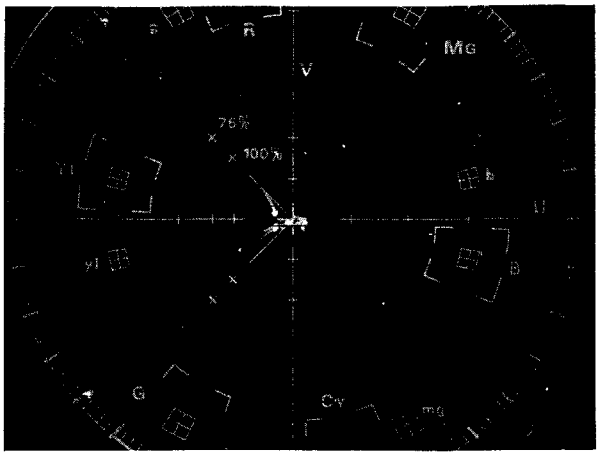




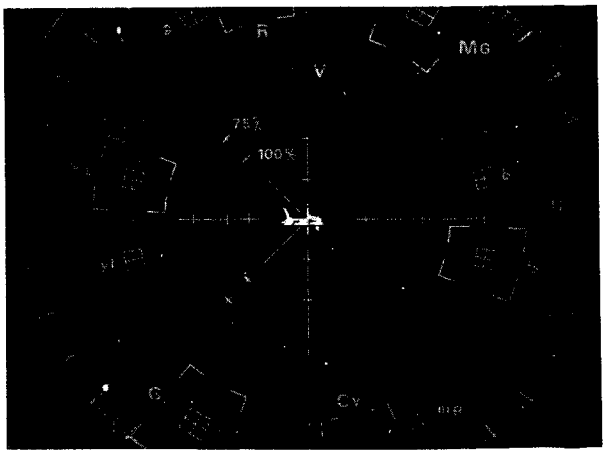
Step 2. Put the right two spots upon each other.
Adj; EN-7 Board ⊘VR5



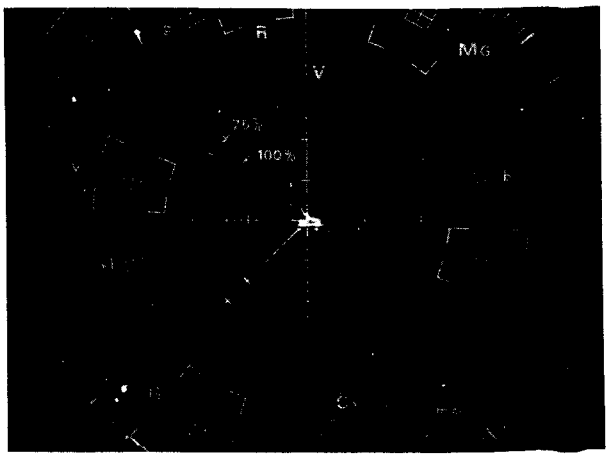
Step 3. Put the right spot upon the screen centre.
Adj; EN-7 Board ⊘VR2



Step 4. Put the left two spots upon each other.
Adj; EN-7 Board ⊘VR3



Step 5. Put the left spot upon the screen centre.
Adj; EN-7 Board ⊘VR1



20-3. U/V BALANCE ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

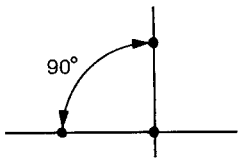
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Vectorscope
Mode; Vector, PAL

Spec. & Adj.
VIDEO OUT (Connector Panel)

Spec;



Adj; EN-7 Board ⊘VR4

20-4. CHROMA DC OFFSET ADJUSTMENT

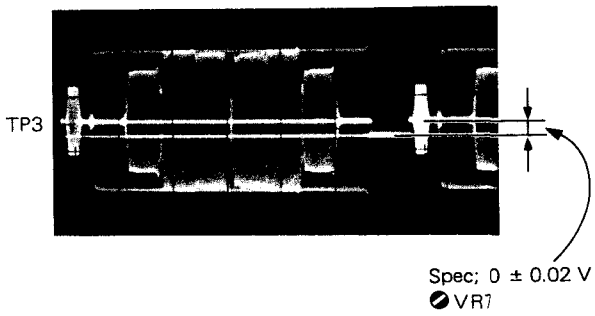
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
EN-7 Board



Spec; 0 ± 0.02 V
⊘VR7

SECTION 21
CHROMA OUTPUT LEVEL ALIGNMENT

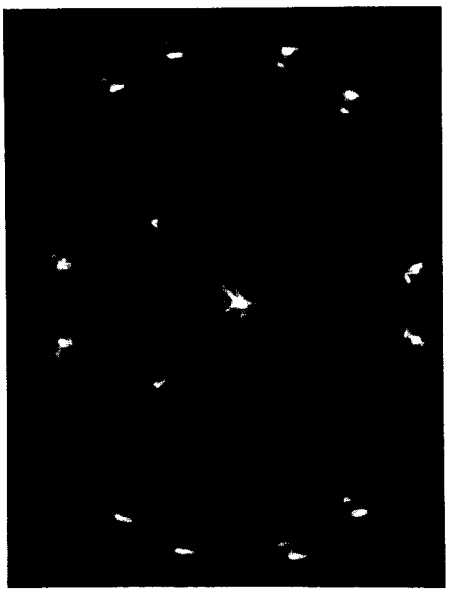
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

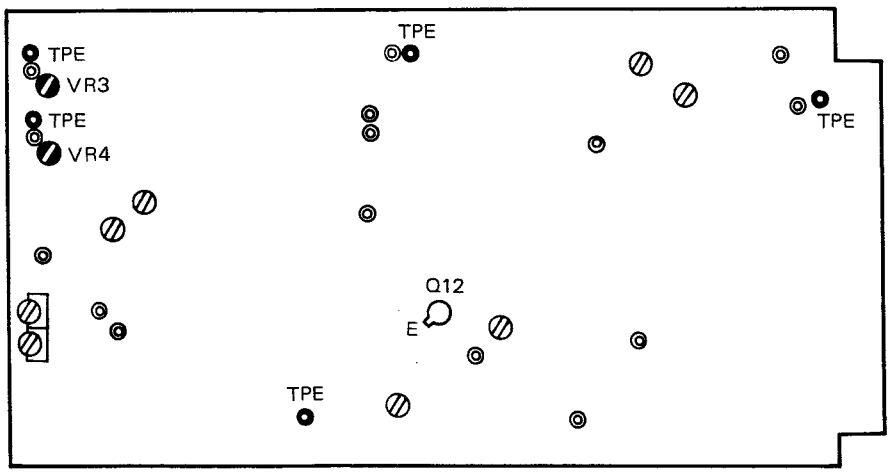
Switches & Controls Setting;
Same as Section 5-3

Equipment; Vectorscope
Mode; Vector, PAL

Spec. & Adj.
VIDEO OUT (Connector Panel)



Spec; Each of twelve spots (YL, CY, G, MG, R, B, yl, cy, g, mg, r and b) should be in the each target of plus/minus 3° and 5%.
Adj; AD-5 Board ⊘VR3
⊘VR4



DA-5 board (component side)

SECTION 22
VIDEO OUTPUT AMPLIFIER ALIGNMENT

22-1. DUB-OUT Y LEVEL ADJUSTMENT

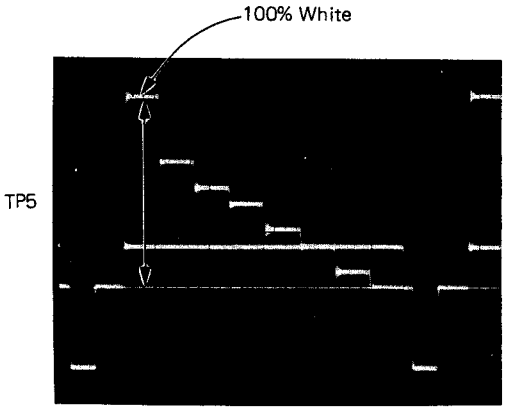
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board



Spec; 0.70 ± 0.05 V
VR2

22-2. VIDEO OUT Y LEVEL ADJUSTMENT

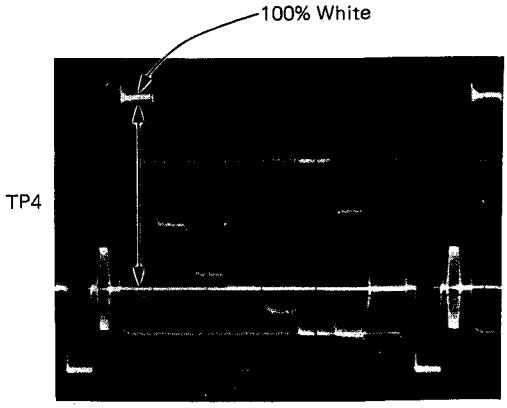
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

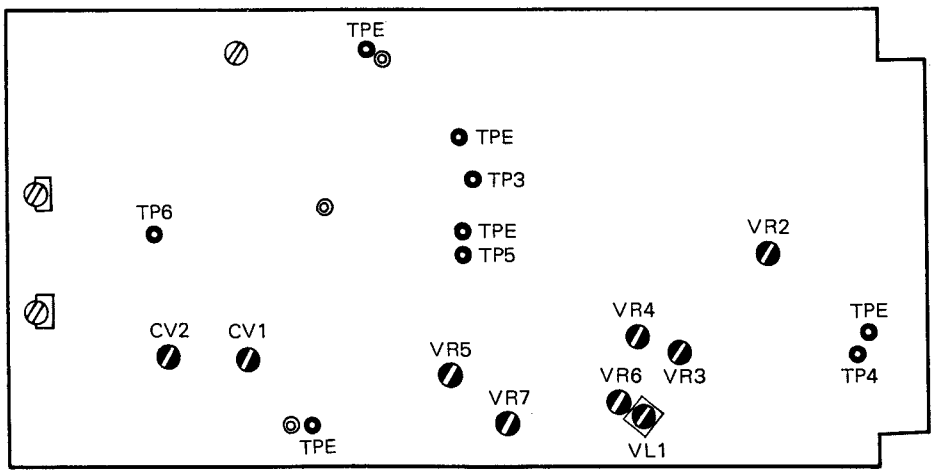
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board



Spec; 0.7 ± 0.015 V
VR4



IO-3 board (component side)

22-3. VIDEO OUT SYNC WAVEFORM & LEVEL ADJUSTMENT

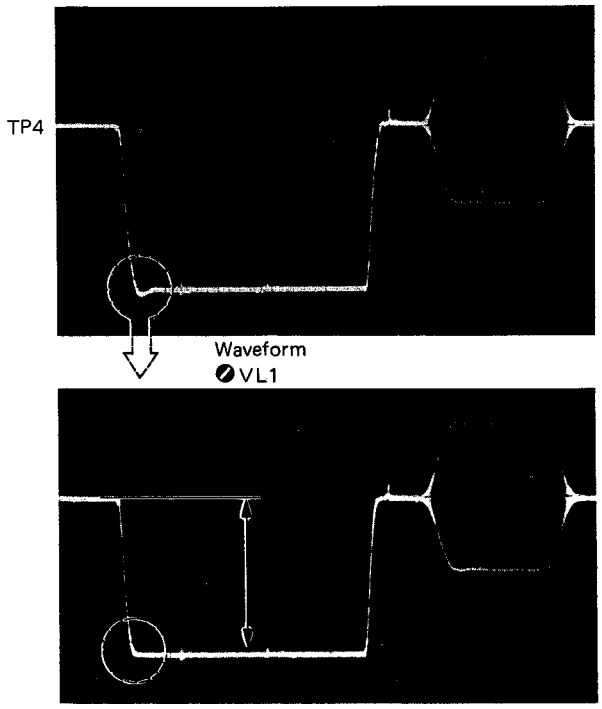
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board



Sync Level
Spec; 0.300 ± 0.005 V
VR6

22-4. VIDEO OUT BURST SIGNAL ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

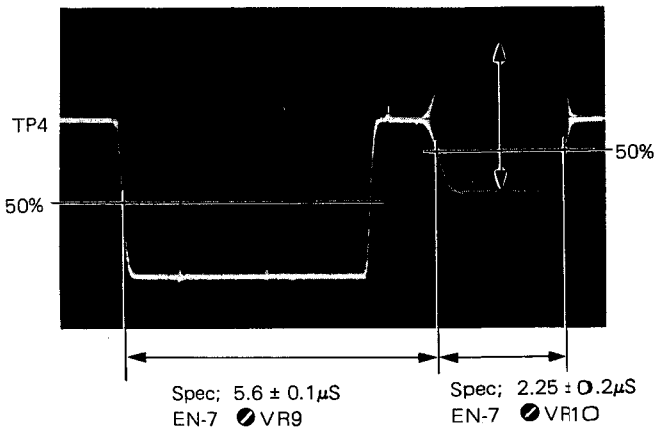
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

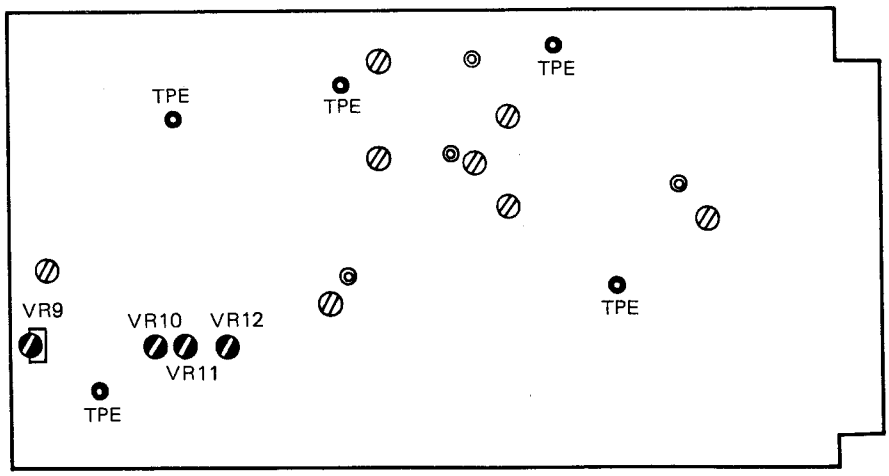
Spec. & Adj.
IO-3 Board

Spec; 0.300 ± 0.005 V
IO-3 VR3



Spec; 5.6 ± 0.1μS
EN-7 VR9

Spec; 2.25 ± 0.2μS
EN-7 VR10



EN-7 board (component side)

22-5. DUB-OUT SYNC LEVEL ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

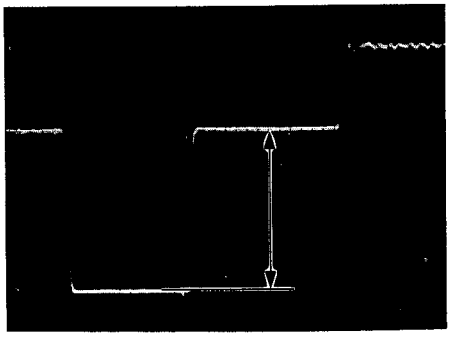
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board

TP5



Spec; 0.300 ± 0.005 V
⊘VR7

22-6. DUB-OUT CONVERTER OSCILLATOR FREQ. ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Either is all right: connected or not connected.

Switches & Controls Setting;
Same as Section 5-3 (See Step 2.)

Equipment; Oscilloscope
Frequency Counter
Connect the oscilloscope vertical output to the frequency counter input.

Step 1. U-matic H Mode Adjustment
Confirm that the OUTPUT U-matic/U-matic H switch on the control panel is set at "U-matic H".
IO-3 Board
at TP3; 5,357,442 ± 50 Hz
⊘CV1

Step 2. U-matic Mode Adjustment
Set the OUTPUT U-matic/U-matic H switch to "U-matic".
IO-3 Board
at TP3; 5,119,116 ± 50 Hz
⊘CV2

Step 3. Set the OUTPUT U-matic/U-matic H switch to "U-matic H".

22-7. DUB-OUT CHROMA LEVEL ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

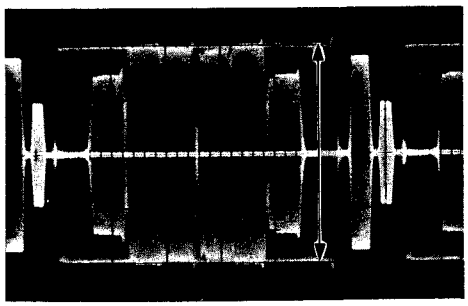
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board

TP6



Spec; 1.00 ± 0.01 V (75%/RED)
⊘VR5

22-8. DUB-OUT PILOT BURST ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

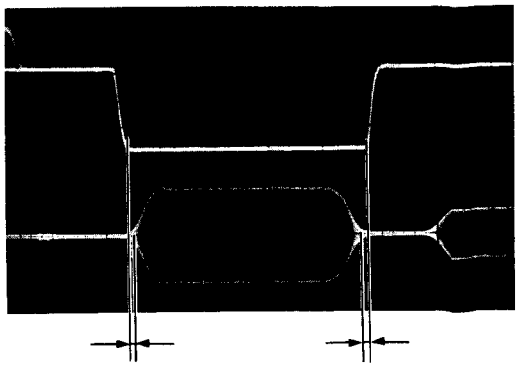
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
IO-3 Board

TP5

TP6



Minimize.
EN-7 ⊘VR11

Minimize.
EN-7 ⊘VR12

SECTION 23
FREQUENCY RESPONSE ALIGNMENT

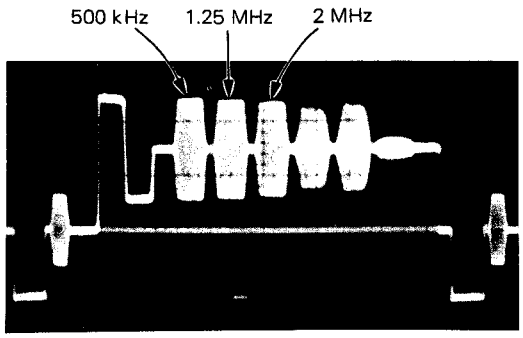
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Multiburst

Switches & Controls Setting;
Same as Section 5-3

Equipment; Waveform Monitor

Spec. & Adj.
VIDEO OUT (Connector Panel)



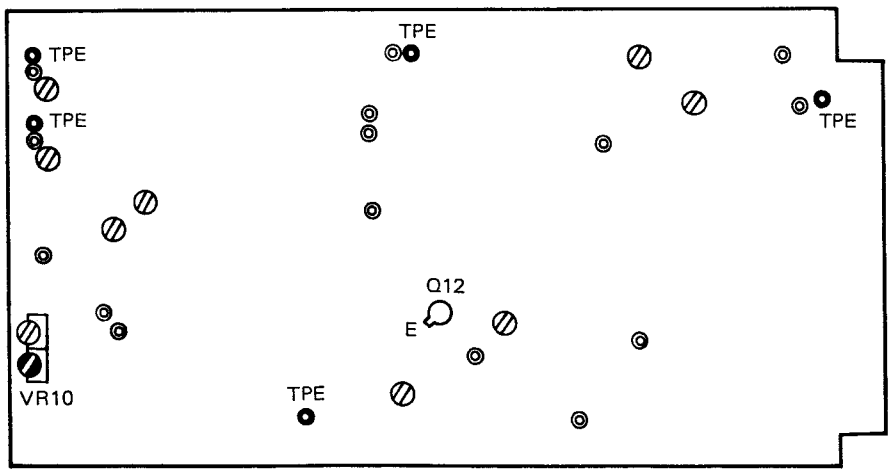
Spec;

$$\frac{\text{1.25 MHz Amplitude}}{\text{500 kHz Amplitude}} = \frac{100 \pm 5}{100}$$

$$\frac{\text{2 MHz Amplitude}}{\text{500 kHz Amplitude}} = \frac{100 \pm 5}{100}$$

2 MHz Amplitude ≦ 1.25 MHz Amplitude

DA-5 Board ◐VR10



DA-5 board (component side)

SECTION 24
NOISE CANCELLER ALIGNMENT

Connection; Same as Section 5-2, Connection 2

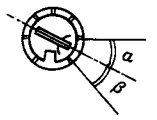
Input Signal (BVU-200P, VIDEO IN);
Multiburst

Mode of VTR; E-to-E

Switches & Controls Setting;
Same as Section 5-3 except the following:
Control Panel
INPUT COMP/DUB Switch; DUB
DA-5 Board
SW1 (NOISE CANCELLER Switch); ON

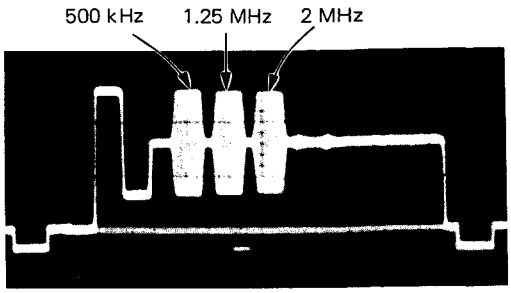
Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Spec. & Adj.
Set the ⊘VR7/DA-5 board as follows.



$\alpha = \beta$

Then, adjust as follows.
DA-5 Board TP12

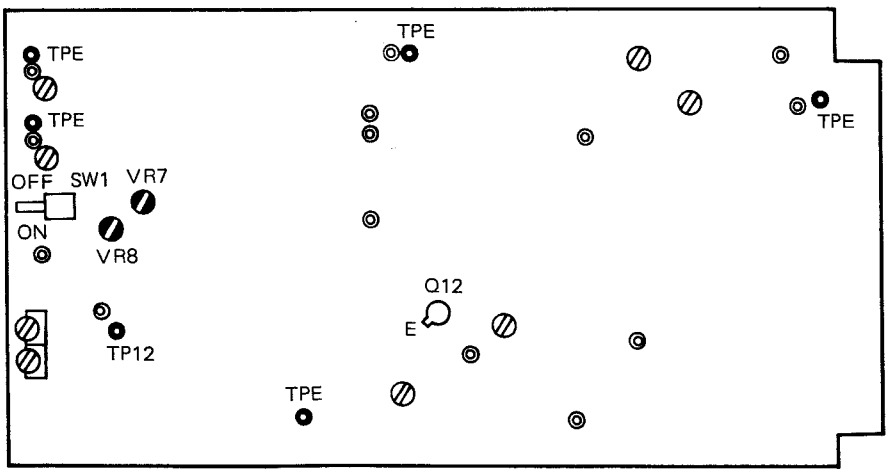


Spec; $\frac{\text{1.25 MHz Amplitude}}{\text{500 kHz Amplitude}} = \frac{100 \pm 5}{100}$

$\frac{\text{2 MHz Amplitude}}{\text{500 kHz Amplitude}} = \frac{100 \pm 5}{100}$

DA-5 Board ⊘VR8

After adjustment, set the NOISE CANCELLER switch to OFF.



DA-5 board (component side)

SECTION 25
VIDEO PHASE ALIGNMENT

25-1. VIDEO PHASE PRESET CALIBRATION

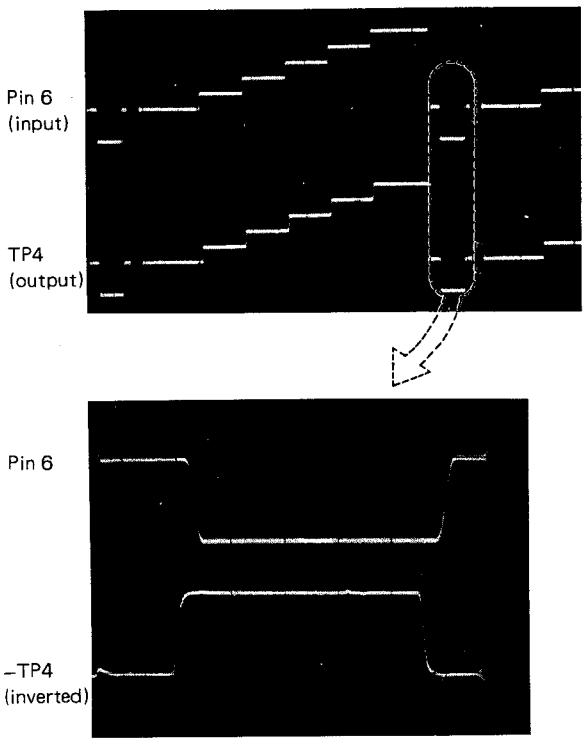
Connection; Same as Section 5-2, Connection 1

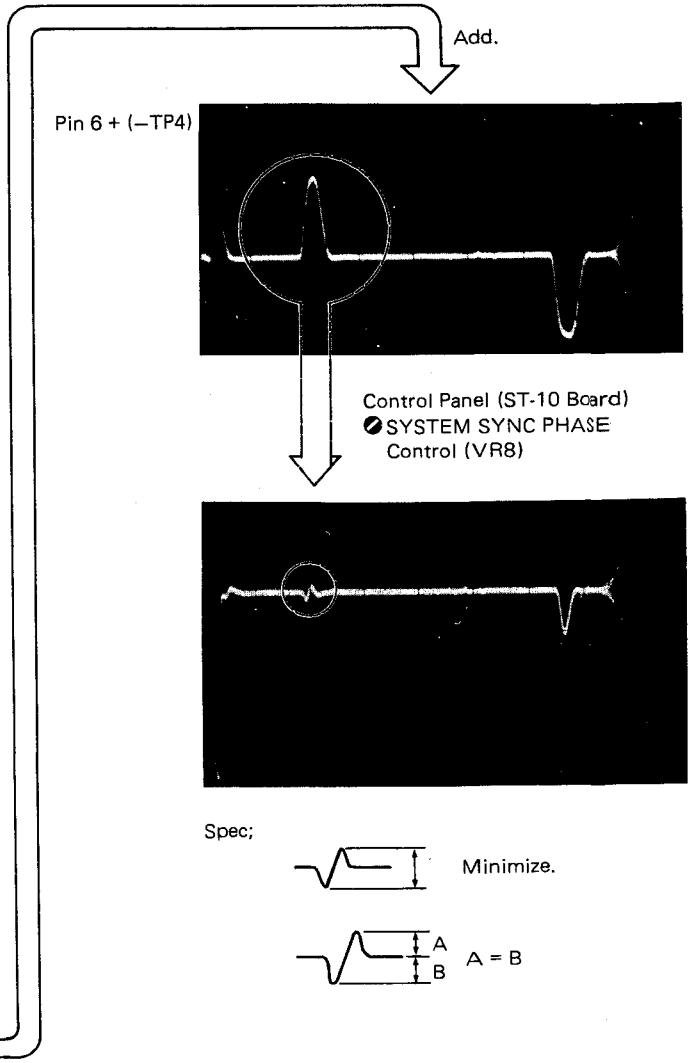
Input Signal (OFF TAPE VIDEO IN);
5 Steps Linearity (subcarrier off)

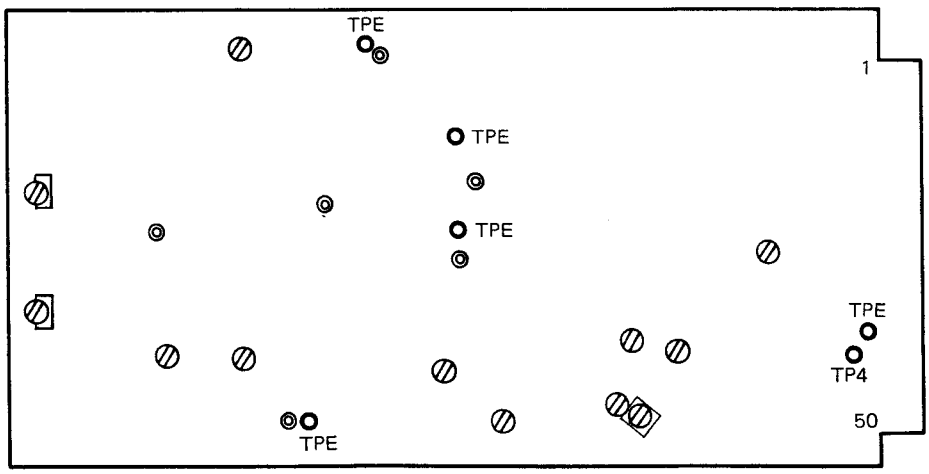
Switches & Controls Setting;
Same as Section 5-3

Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1. SYSTEM SYNC PHASE Control Calibration
IO-3 Board





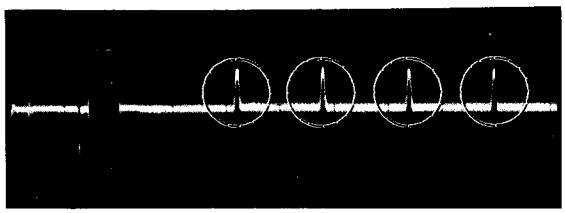


IO-3 board (component side)

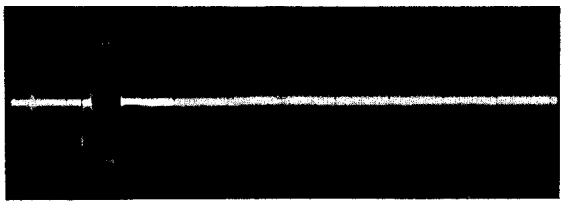
Step 2. VIDEO PHASE PRESET Calibration

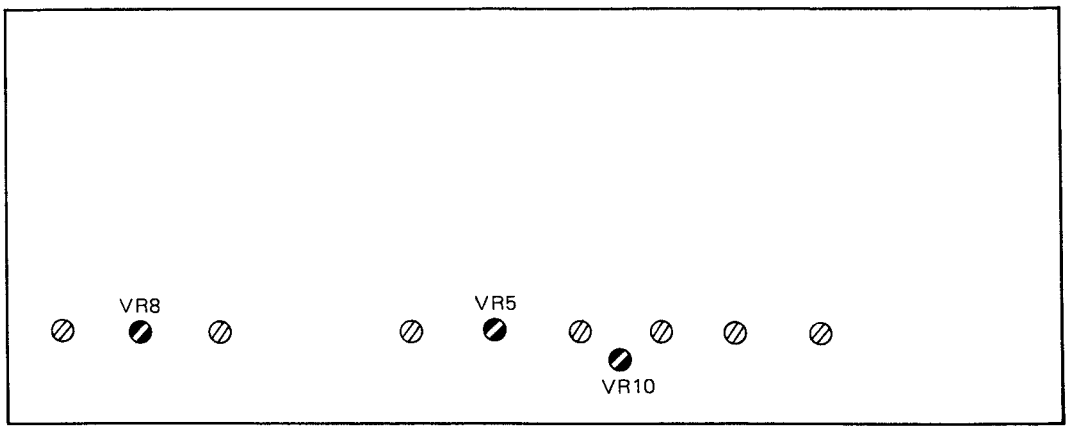
IO-3 Board

Pin 6 + (—TP4)



ST-10 Board ⊘ VR10
Minimize the spike.





ST-10 board (solder side)

25-2. CHROMA BLANKING ADJUSTMENT

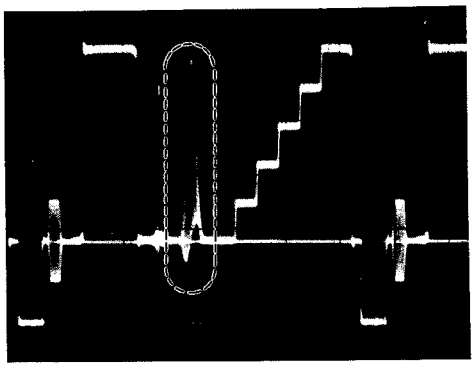
Connection; Same as Section 5-2, Connection 1

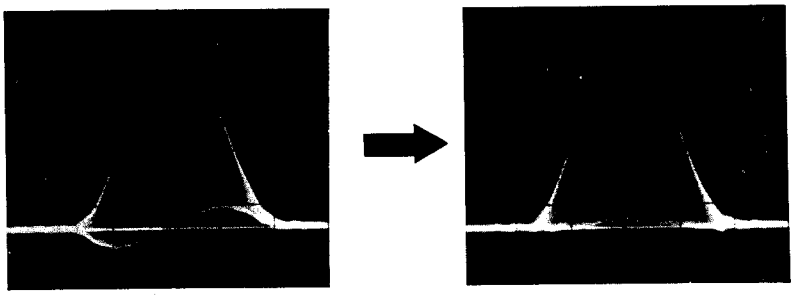
Input Signal (OFF TAPE VIDEO IN);
Step 1; LINE 17 Signal
Step 2; Colour Bars

Switches & Controls Setting;
Same as Section 5-3 (See Step 2.)

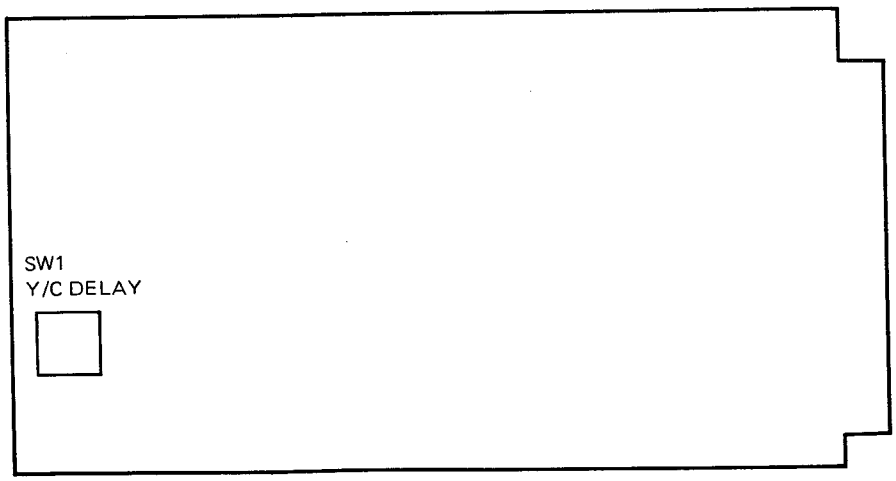
Equipment; Oscilloscope
Trigger; HD (TP5/SG-21)

Step 1. Y/C DELAY Control Calibration
Input Signal; LINE 17 Signal
IO-3 Board TP4





MY-5 Board ● Y/C DELAY Coarse Adj SW (SW1)
Control Panel ● Y/C DELAY Control (ST-10 Board VR5)



MY-5 board (component side)

Step 2. Chroma Blanking Adjustment

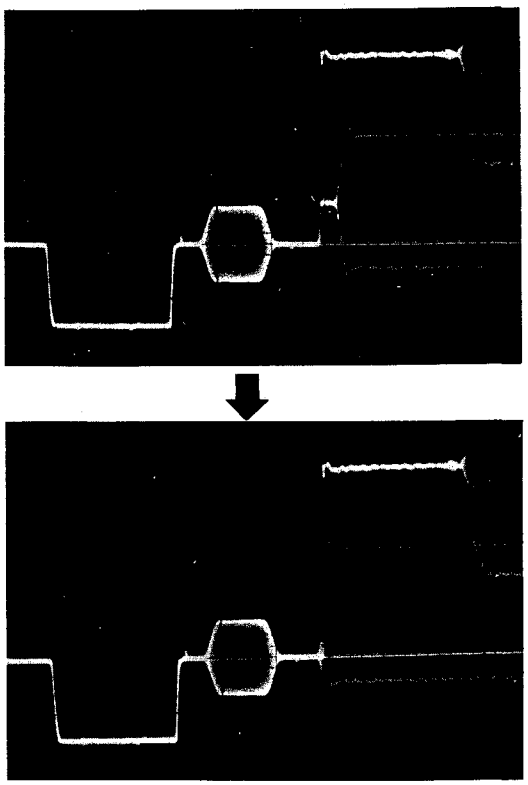
Input Signal; Colour Bars

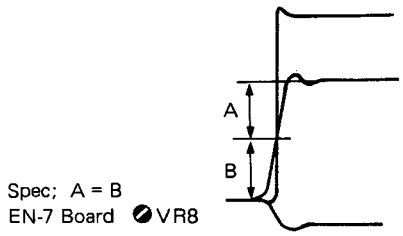
Control Panel

VIDEO PHASE PRESET/MANUAL Switch; MANUAL

VIDEO PHASE Control; ↻ fully

IO-3 Board TP4

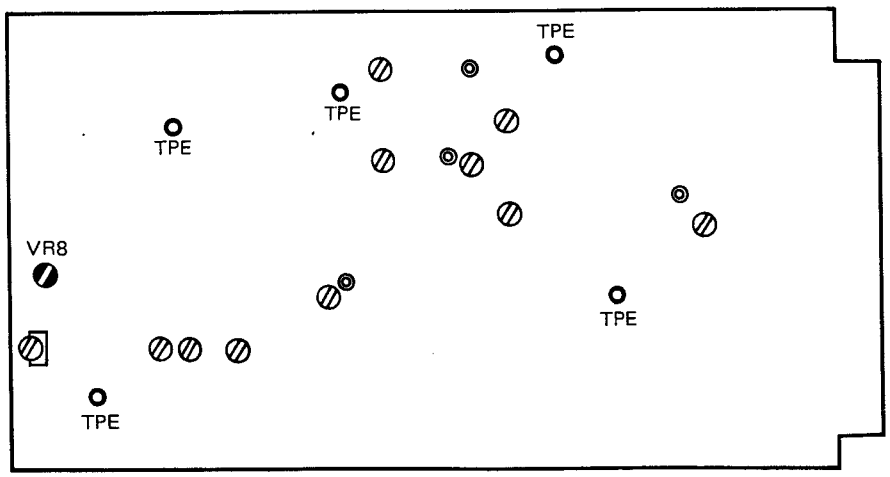




Spec; A = B

EN-7 Board ⊘VR8

Note: After adjustment, set the VIDEO PHASE PRESET/MANUAL switch to "PRESET"



EN-7 board (component side)

SECTION 26
BEAT CANCELLER ALIGNMENT

26-1. DC CLAMP CHECK

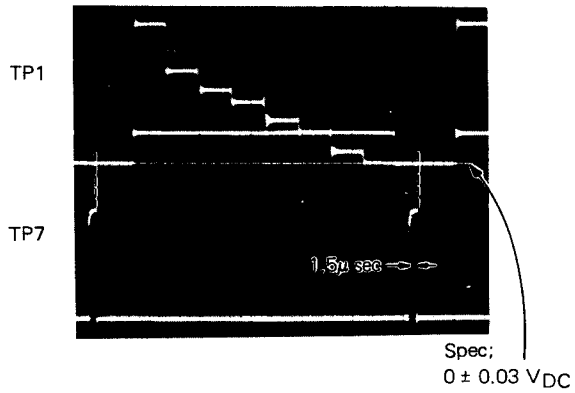
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipments; Optional Fixture
40P Extension Cable Ass'y
Oscilloscope

Spec;
BE-1 Board



If out of specifications, check the following.

TP7 (BE-1 board); Refer to above.
IC 2, 3 and 4 (BE-1 board)

26-2. MOD/DEMOD CARRIER ADJUSTMENT

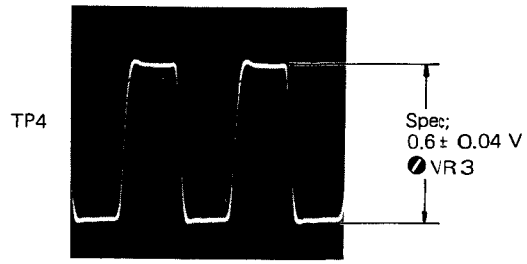
Connection; Same as Section 5-2, Connection 1

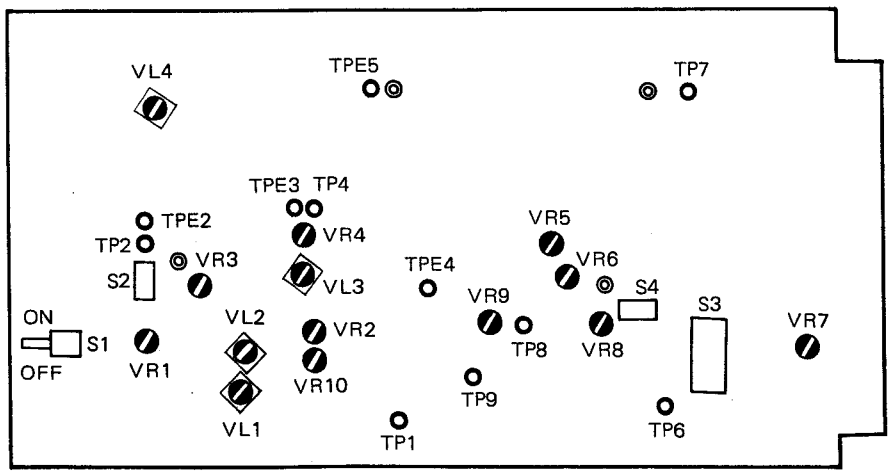
Input Signal (OFF TAPE VIDEO IN);
Composite PAL Signal or no Signal

Switches & Controls Setting;
Same as Section 5-3 except the following
BE-1 Board
S1 (CANCEL ON/OFF Switch); ON
S2 (Test Switch) Channel 1; OFF
Channel 2; ON

Equipments; Optional Fixture
40P Extension Cable Ass'y
Oscilloscope
Frequency Counter

Step 1. Mod. Carrier Level Adjustment
BE-1 Board





BE-1 board (component side)

Step 2. Carrier Freq. Pre-Adjustment

Note: Carrier Frequency should be re-adjusted in Sec. 26-3 "2H DELAY ADJUSTMENT".

BE-1 Board

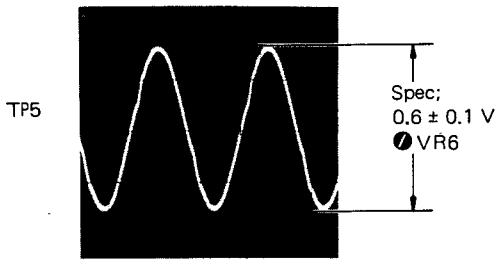
Spec; BE-1 board TP4 = 9.5 ± 0.2 MHz

⊘VL4

Step 3. Demod. Carrier Level Pre-Adjustment

Note: Demod. carrier level should be re-adjusted in Sec. 26-4 "DEMOD CARRIER LEVEL ADJ".

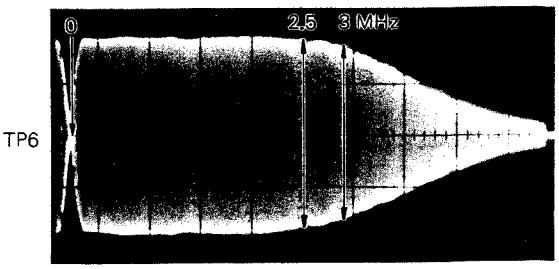
BE-1 Board



Note: After completing adjustments, set the switch S2-1 to ON and S2-2 to OFF.

Step 3. 2H Delay Adjustment

BE-1 Board



Spec; at 0 to 2.5 MHz = flat as possible

$$\frac{\text{at 3 MHz}}{\text{flat portion}} \geqq 0.85$$

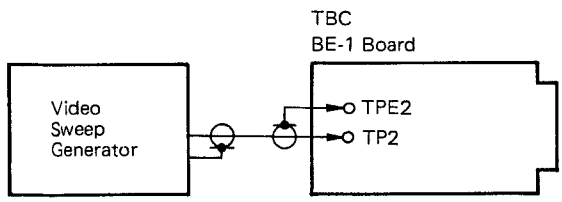
⊘VL3, ⊘VL4

If ⊘VL3 and ⊘VL4 cannot satisfy the specifications, adjust ⊘VR4 and ⊘VR5 also.

Note: After completing adjustments, set the switch S2-1 to ON and S2-2 to OFF.

26-3. 2 H DELAY ADJUSTMENT

Connection;



Switches & Controls Setting;

Same as Section 5-3 except the following

BE-1 Board

S1 (CANCEL ON/OFF Switch); ON

S2 (Test Switch) Channel 1; OFF

Channel 2; ON

Equipments; Optional Fixture

40P Extension Cable Ass'y

Oscilloscope

Video Sweep Generator (0 to 5 MHz)

Step 1. Video Sweep Generator Setting

Sweep Range; 0 to 5 MHz

Signal Level; 0.5 Vpp at TP6/BE-1 Board

Step 2. BE-1 Board Pre-Setting

⊘VR4; Mechanical Centre

⊘VR5; mechanical Centre

26-4. DEMODULATOR CARRIER ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);

Composite PAL Signal or no Signal

Switches & Controls Setting;

Same as Section 5-3 except the following

BE-1 Board

S1 (CANCEL ON/OFF Switch); ON

S2 (Test Switch) Channel 1; OFF

Channel 2; OFF

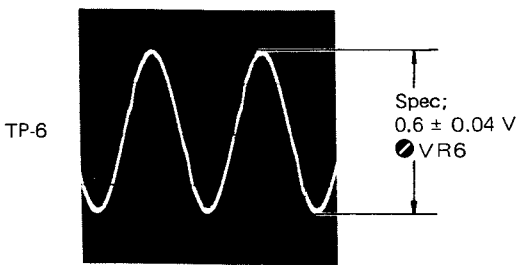
Equipments; Optional Fixture

40P Extension Cable Ass'y

Oscilloscope

Spec. & Adj.

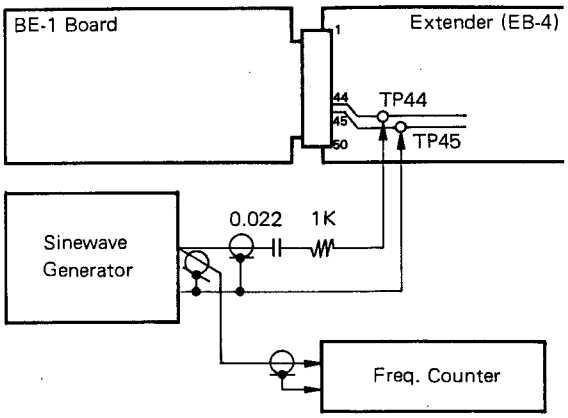
BE-1 Board



Note: After completing adjustment, set the switch S2-1 to ON and S2-2 to OFF.

26-5. BEAT CANCELLATION ADJUSTMENT

Connection; Same as Section 5-2, Connection 1 except the following



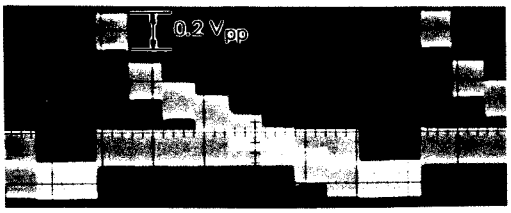
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3 except the following
BE-1 Board
S1 (CANCEL ON/OFF Switch); ON

Equipmens; Optional Fixture
40P Extension Cable Ass'y
Sinewave Generator (1.3 to 1.9 MHz)
Frequency Counter
Oscilloscope

Step 1. Sine Wave Generator Setting (for U-matic H Mode)

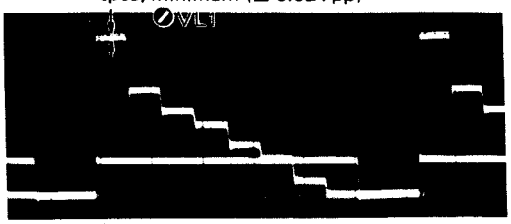
frequency ; 1,847,656 ± 500 Hz
level ; 0.2 Vpp at TP44/Extender EB-4



Step 2. Beat Separator Tuning (for U-matic H Mode)

BE-1 board
S4-1; OFF
S4-2; OFF

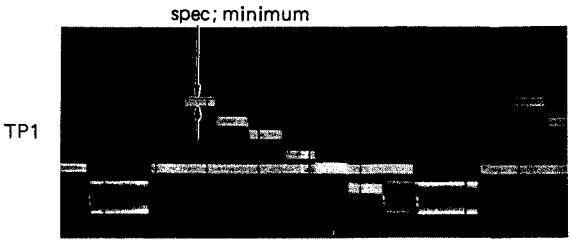
spec; minimum (≦ 0.02Vpp)



Step 3. Y Low/High Mix Adjustment (for U-matic H Mode)

BE-1 board
S4-1; ON
S4-2; OFF

spec; minimum



adj; ◐VR7 and
S3 (Select optimum one of eight channels.)

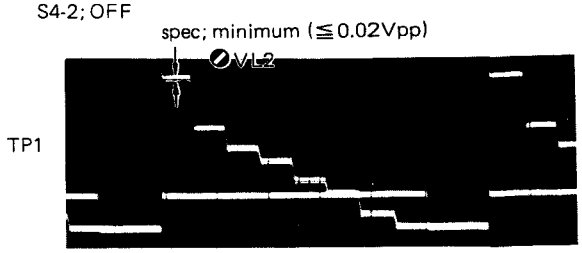
Step 4. Sine Wave Generator Setting (for U-matic Mode)

frequency; 1,371,094 ± 500 Hz
level ; 0.2 Vpp at TP44/Extender EB-4
(See step 1.)

Step 5. Beat Separator Tuning (for U-matic Mode)

Control panel INPUT U/U-H switch; U
BE-1 board
S4-1; OFF
S4-2; OFF

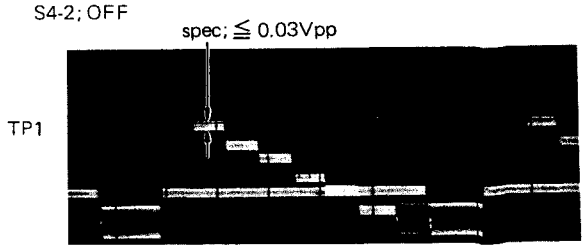
spec; minimum (≦0.02Vpp)



Step 6. Y Low/High Mix Check (for U-matic Mode)

Control panel INPUT U/U-H switch; U
BE-1 board
S4-1; ON
S4-2; OFF

spec; ≦ 0.03Vpp



Note: After completing adjustments, set the switch "INPUT U/U-H" on the control panel to "U-H" position.

26-6. Y EDGE LEVEL DET. ADJUSTMENT

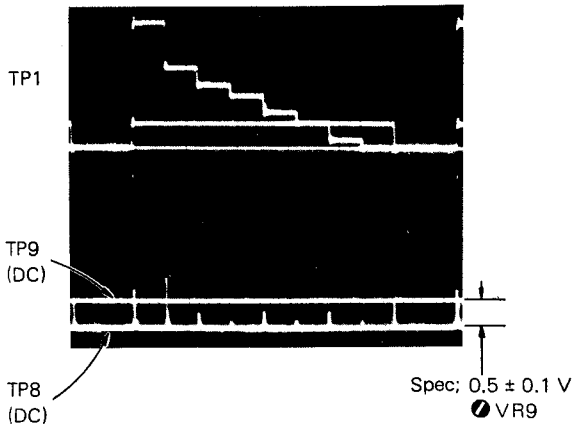
Connection; Same as Section 5-2, Connection 1

Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3 except the following
BE-1 Board
S1 (CANCEL ON/OFF Switch); ON

Equipment; Optional Fixture
40P Extension Cable Ass'y
Oscilloscope
Input Coupling; DC

Spec. & Adj.
BE-1 Board



26-7. PROCESS Y OUTPUT LEVEL ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

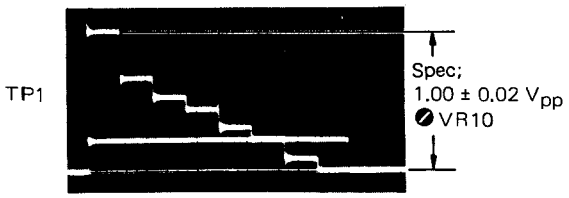
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3

Equipment; Optional Fixture
40P Extension Cable Ass'y
Oscilloscope

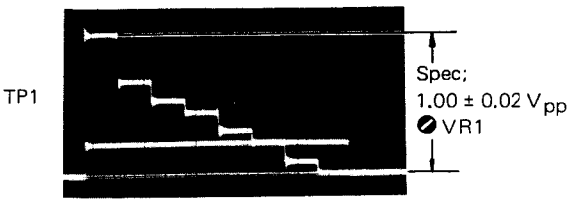
Step 1. Cancel-off Mode Output Level Adjustment

BE-1 Board
S1; OFF



Step 2. Cancel-on Mode Output Level Adjustment

BE-1 Board.
S1; ON



26-8. CANCEL KILLER OFFSET ADJUSTMENT

Connection; Same as Section 5-2, Connection 1

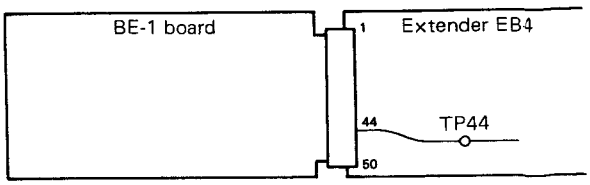
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3 except the following
BE-1 Board
S1 (CANCEL ON/OFF Switch); ON

Equipment; Optional Fixture
40P Extension Cable Ass'y
Oscilloscope

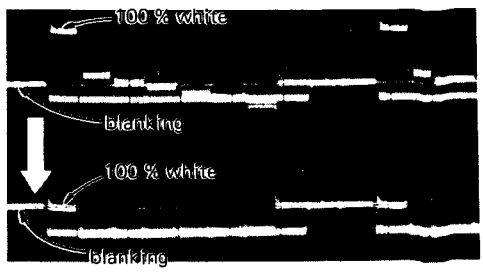
Step 1. Scope Setting

CH-1; TP1/BE-1 board
CH-2; { TP44/Extender EB-4
INVERT mode
ADD mode



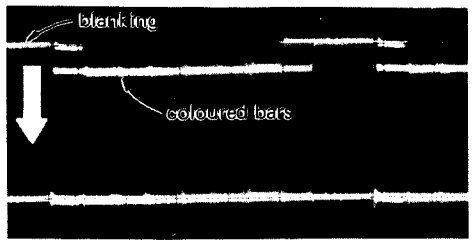
Adjust the scope's gain control so that the level at white signal portion is same as the level at blanking signal portion.

TP1 + (−TP44)
BE-1 EB-4



Step 2. Switching Offset Adjustment

Adjust the level at coloured bars portion to the same level as blanking signal portion.



26-9. TRANSIENT ADJUSTMENT

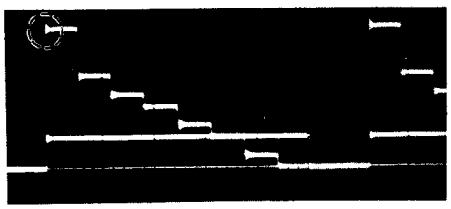
Connection; Same as Section 5-2, Connection 1

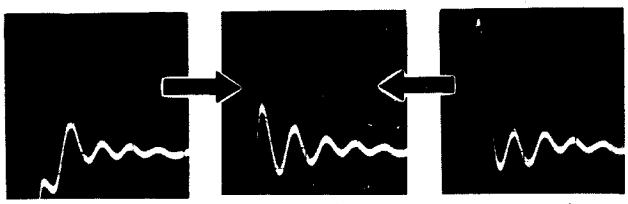
Input Signal (OFF TAPE VIDEO IN);
Colour Bars

Switches & Controls Setting;
Same as Section 5-3 except the following
BE-1 Board
S1 (CANCEL ON/OFF Switch); ON

Equipment; Optional Fixture
40P Extension Cable Ass'y
Oscilloscope

Spec. & Adj.
BE-1 Board





no good good no good

Note: Adjust VR2 so that the wave shape when switch S1 on the BE-1 board is set at "ON" position is same as it when S1 is "OFF".

SPARE PARTS & FIXTURE

PARTS INFORMATION

1. **Safety Related Component Warning**

   Components identified by shading on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in service bulletins and service manual supplements published by Sony.

2. Replace Parts that are supplied from Sony Parts Center can sometimes have different shape and external appearance than what are actually used in equipment. This is due to **"accomodating the improved parts and/or engineering changes"** or **"standardization of genuine parts"**.

   - This manual's exploded views and electrical spare parts list are indicating the parts numbers of "the standardized genuine parts at present".
   - Regarding engineering parts changes in our engineering department, refer Sony service bulletins and service manual supplements.

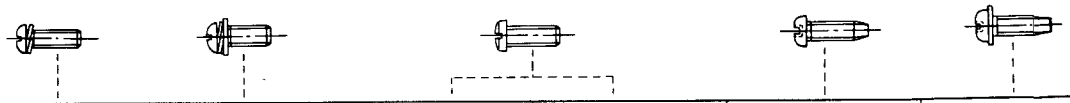
3. **Printed Components in Bold-Face type** on the exploded views and electrical spare parts list are normally stocked for replacement purposes. The remaining parts are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.

4. Item with no part number and/or no description are not stocked because they are seldom required for routine service.

5. The exploded views and parts list show the applicable model name after PARTS NO.
   Take care when ordering parts.
   Moreover, even after all the component, that have a specific model name to be applied, were replaced, one model cannot be modified to another model because non-serviceable parts such as harness are different depending on each model.

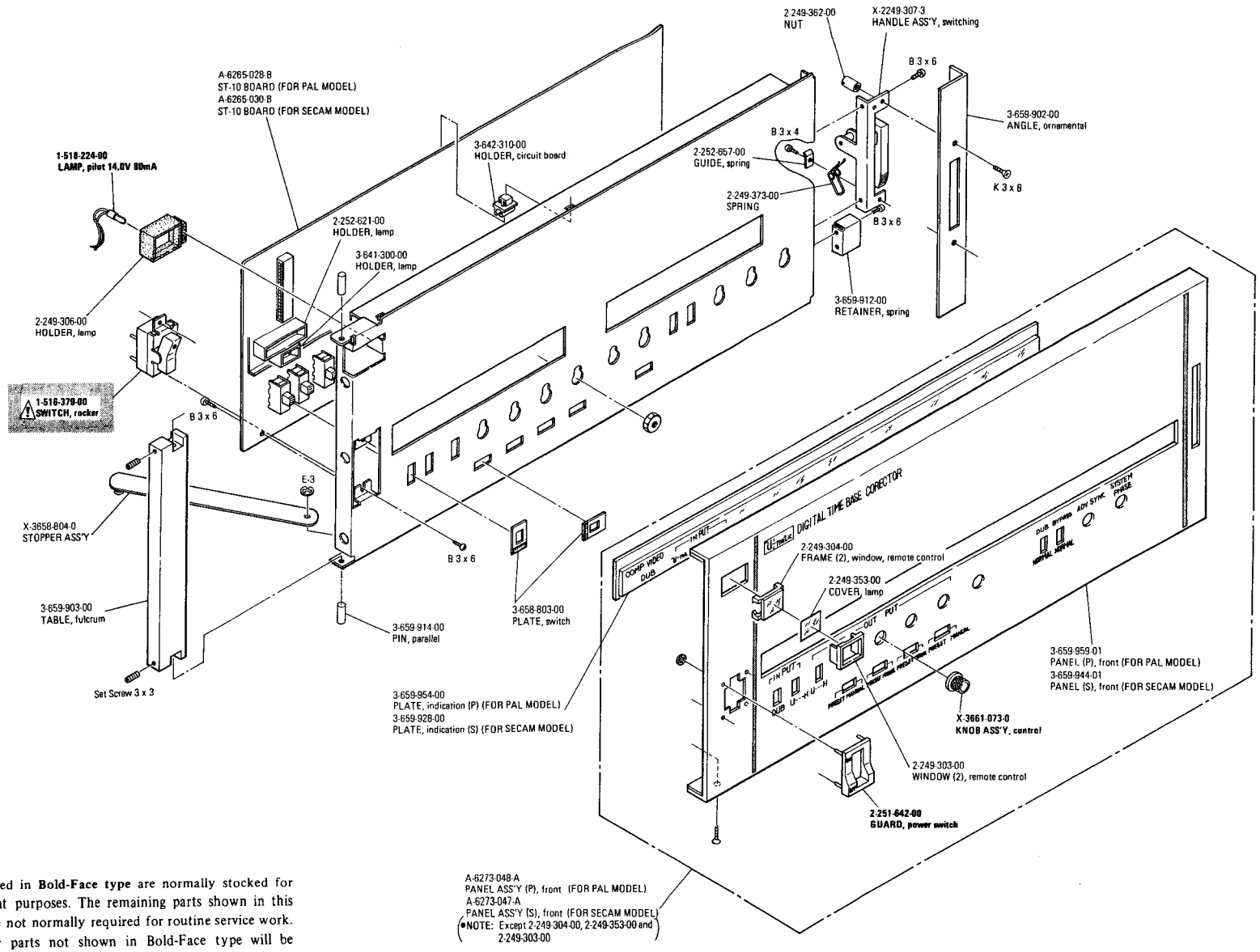
6. (T) after the description of spring shown on the parts list means the number of a spring turn required for the use. (For example, Spring, tension (24T); This spring must be cut at its 24th turn for actual use.)

7. Screws
   - All the screws used in this machine are the TOTSU type unless otherwise noted. The screws are interchangeable with the Phillips type (⊕) and slotted type (⊖) screws.
   - Please order as the following part number when ordering the TOTSU type screws.



Size	PS	PSW	B (BZnN)	B (Cr-N)	PTT	PTTWH
2.6 x 4	7-621-972-05	———	7-621-912-10	7-621-912-18	———	———
2.6 x 6	7-621-972-25	———	7-621-912-30	7-621-912-38	———	———
2.6 x 8	7-621-972-35	———	7-621-912-40	7-621-912-48	———	———
2.6 x 10	7-621-972-45	———	7-621-912-50	7-621-912-58	———	———
2.6 x 12	7-621-972-55	———	7-621-912-60	7-621-912-68	———	———
3 x 6	7-686-447-01	7-686-527-01	7-686-624-09	7-686-624-04	7-687-411-31	7-687-510-31
3 x 8	7-686-448-01	7-686-528-01	7-686-625-09	7-686-625-04	7-687-412-31	7-687-511-31
3 x 10	7-686-449-01	7-686-529-01	7-686-626-09	7-686-626-04	7-687-413-31	7-687-512-31
3 x 12	7-686-450-01	7-686-530-01	7-686-627-09	7-686-627-04	———	———
3 x 16	7-686-452-01	7-686-532-01	7-686-629-09	7-686-629-04	———	———
3 x 25	7-686-454-01	7-686-534-01	7-686-631-09	7-686-631-04	———	———
4 x 8	7-686-468-01	———	———	7-686-635-04	———	———
4 x 12	7-686-470-01	———	———	7-686-637-04	———	———
4 x 14	7-686-471-01	———	———	7-686-638-04	———	———
4 x 16	7-686-472-01	———	———	7-686-639-04	———	———
4 x 20	7-686-473-01	———	———	7-686-640-04	———	———

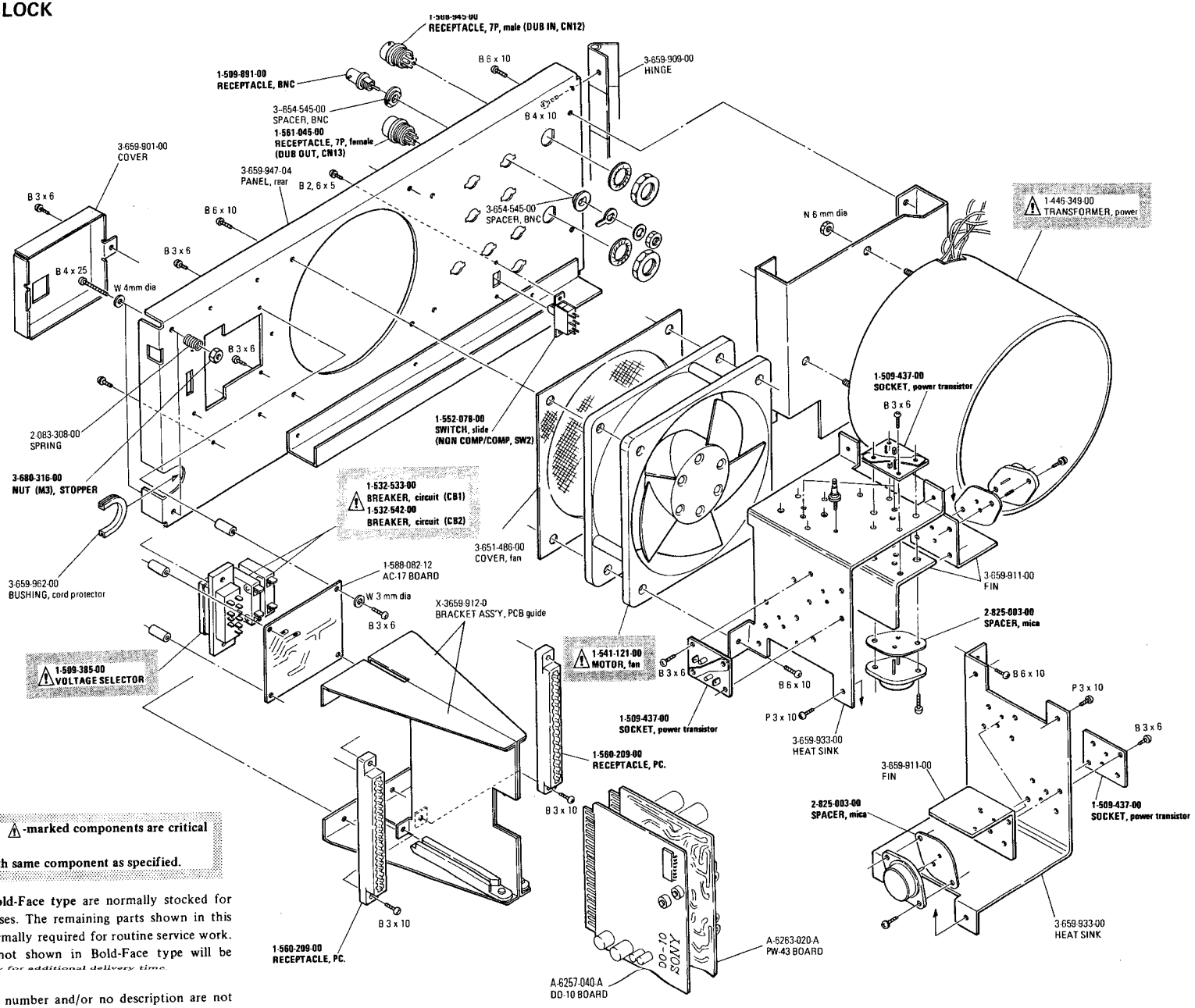
FRONT PANEL BLOCK



NOTE:

1. Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.
2. Item with no part number and/or no description are not stocked because they are seldom required for routine service.

REAR PANEL BLOCK



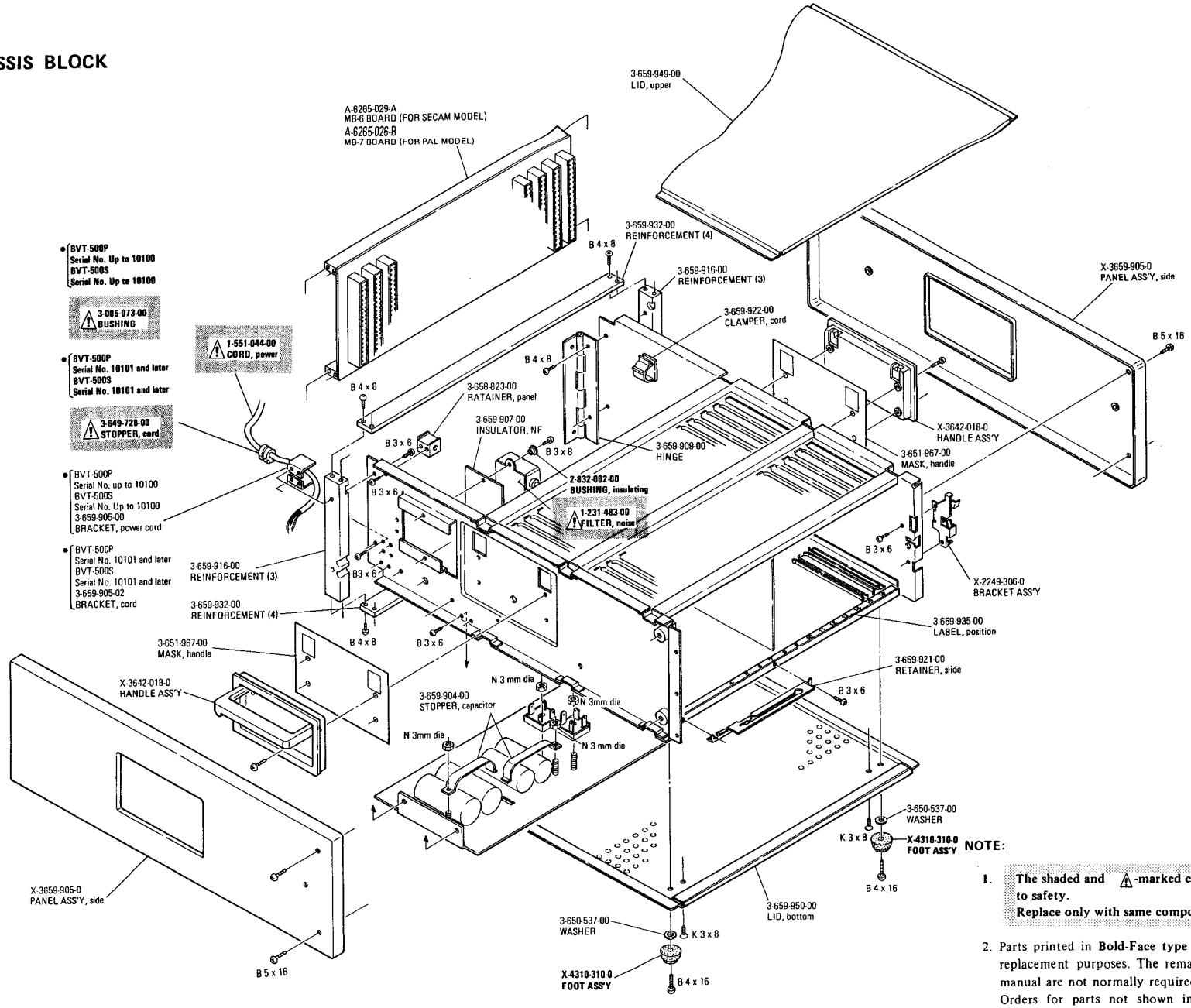
NOTE:

1. **The shaded and ⚠-marked components are critical to safety.**
   Replace only with same component as specified.

2. Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.

3. Item with no part number and/or no description are not stocked because they are seldom required for routine service.

CHASSIS BLOCK



	BVT-500P	BVT-500S
①	BE-1 COMPL A-6257-066-A	RI-3 COMPL A-6265-031-A
②	CK-4 COMPL A-6259-076-A	SAME AS LEFT
③	SG-21 COMPL A-6259-073-A	SG-20 COMPL A-6259-074-A
④	DA-5 COMPL A-6257-051-A	DA-4 COMPL A-6257-050-A
⑤	MY-5 COMPL A-6259-078-A	SAME AS LEFT
⑥	MY-4 COMPL A-6259-077-A	SAME AS LEFT
⑦	AD-7 (P) COMPL A-6257-049-A	AD-7 (S) COMPL A-6257-052-A
⑧	AD-6 COMPL A-6257-048-A	SAME AS LEFT
⑨	SS-12 COMPL A-6259-075-A	SAME AS LEFT
⑩	NONE	NONE
⑪	NONE	MD-8 COMPL A-6257-047-A
⑫	EN-7 COMPL A-6257-038-A	BC-3 COMPL A-6257-044-A
⑬	DC-5 COMPL A-6257-046-A	DM-15 COMPL A-6257-043-A
⑭	AP-1 COMPL A-6257-039-A	UI-4 COMPL A-6257-042-A
⑮	UI-3 COMPL A-6257-045-A	IO-3 (S) COMPL A-6257-041-A
⑯	IO-3 (P) COMPL A-6257-037-A	NONE

NOTE:

1. **The shaded and ⚠-marked components are critical to safety.**
   Replace only with same component as specified.
2. Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.
3. Item with no part number and/or no description are not stocked because they are seldom required for routine service.

NOTES FOR PARTS LIST

1. **The shaded and ⚠-marked components are critical to safety.**
   Replace only with same component as specified.
2. Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.
3. **Information for PAL or SECAM**
   Since this parts list includes the information of the two models, BVT-500P (PAL) and BVT-500S (SECAM), pay attention to the notice such as "ONLY PAL" or "ONLY SECAM".
4. **Units of Capacitance, Inductance and Resistance**
   All capacitors are in micro farads unless otherwise specified.
   All inductors are in micro henries unless otherwise specified.
   All resistors are in ohms.

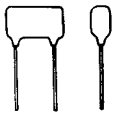
5. **Abbreviation**

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
BD□□	DIODE, BRIDGE	**FB**□□	FERRITE BEAD	**RN**□□	RESISTOR BLOCK
BPF□□	FILTER, BANDPASS	**IC**□□	INTEGRATED CIRCUIT	**SW**□□	SWITCH
C□□	CAPACITOR, FIXED	**L**□□	INDUCTOR, FIXED	**T**□□	TRANSFORMER
CB□□	BREAKER, CIRCUIT	**LPF**□□	FILTER, LOW-PASS	**TP**□□	TERMINAL, TEST POINT
CF□□	FILTER, CERAMIC	**M**□□	MOTOR	**TPE**□□	TERMINAL, TEST POINT
CN□□	CONNECTOR	**PL**□□	LAMP	**VC**□□	DIODE, VARICAP
CV□□	CAPACITOR, TRIMMER	**Q**□□	TRANSISTOR	**VL**□□	INDUCTOR, VARIABLE
D□□	DIODE	**R**□□	RESISTOR, FIXED	**VR**□□	RESISTOR, VARIABLE
DL□□	DELAY LINE	**RL**□□	RELAY	**X**□□	CRYSTAL

6. Omitted Parts

The following resistors are not listed in the "reference numbers order list".

METAL FILM RESISTOR ± 1%, 1/4W
10Ω through 100kΩ



Parts No. 1-214-□□□-00

Value	Parts No. −□□□−
10Ω	084
11	085
12	086
13	087
15	088
16	089
18	090
20	091
22	092
24	093
27	094
30	095
33	096
36	097
39	098
43	099
47	100
51	101
56	102
62	103
68	104
75	105
82	106
91	107

Value	Parts No. −□□□−
100Ω	108
110	109
120	110
130	111
150	112
160	113
180	114
200	115
220	116
240	117
270	118
300	119
330	120
360	121
390	122
430	123
470	124
510	125
560	126
620	127
680	128
750	129
820	130
910	131

Value	Parts No. −□□□−
1.0kΩ	132
1.1	133
1.2	134
1.3	135
1.5	136
1.6	137
1.8	138
2.0	139
2.2	140
2.4	141
2.7	142
3.0	143
3.3	144
3.6	145
3.9	146
4.3	147
4.7	148
5.1	149
5.6	150
6.2	151
6.8	152
7.5	153
8.2	154
9.1	155

Value	Parts No. −□□□−
10kΩ	156
11	157
12	158
13	159
15	160
16	161
18	162
20	163
22	164
24	165
27	166
30	167
33	168
36	169
39	170
43	171
47	172
51	173
56	174
62	175
68	176
75	177
82	178
91	179
100	180

Ref. No.	Part No.	Description
AC-17 BOARD (PAL & SECAM)		
---	1-588-082-12	PC BOARD, AC-17
⚠ ---	1-509-385-00	VOLTAGE SELECTOR
⚠ CB1	1-532-533-00	BREAKER, CIRCUIT, AC250V 5A
⚠ CB2	1-532-542-00	BREAKER, CIRCUIT, AC250V 2.5A
AD-6 BOARD (PAL & SECAM)		
NOTE 1.	Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".	
NOTE 2.	Reference No. of following capacitors are omitted.	
	1-131-441-00	TANTALUM 22 10% 16V
	1-161-669-00	CERAMIC 0.01 50V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6257-048-A	AD-6 BOARD, COMPLETE
C17	1-131-191-00	TANTALUM 47 10% 6.3V
C33	1-109-534-00	MICA 91PF 5% 100V
C36	1-107-070-00	MICA 24PF 5% 50V
C48	1-131-191-00	TANTALUM 47 10% 6.3V
C60	1-109-534-00	MICA 91PF 5% 100V
C64	1-107-070-00	MICA 24PF 5% 50V
C68	1-109-534-00	MICA 91PF 5% 100V
D2	8-719-102-51	1SZ51
D3, 4, 5, 6	8-719-908-10	FOUR DIODES QSCH-1754
	This part is supplied as a set of four diodes. Replace four diodes at the same time.	
D7	8-719-815-55	1S1555
D8	8-719-815-80	1S1587
D9	8-719-102-51	1SZ51
D10, 11, 12, 13	8-719-908-10	FOUR DIODES QSCH-1754
	This part is supplied as a set of four diodes. Replace four diodes at the same time.	
D14	8-719-815-55	1S1555
D15	8-719-815-80	1S1587
D16	8-719-151-07	RD5.1E-B
DL1	1-415-177-00	DELAY LINE 125ns
FB1 to FB10	1-535-178-00	FERRITE BEADS
IC1	8-759-903-74	SN74LS374N, TTL ; TI
IC2	8-759-900-04	SN74LS04N, TTL ; TI
IC3	8-759-903-74	SN74LS374N, TTL ; TI
IC4	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)
IC5	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)

Ref. No.	Part No.	Description
(AD-6 BOARD, CONTINUED)		
IC6	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)
IC7	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)
IC8	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC9	8-759-001-76	MC101761, ECL ; MOTOROLA
IC10	8-759-930-49	CA3049T ; RCA
IC11	8-759-930-49	CA3040T ; RCA
IC12	8-759-930-49	CA3049T ; RCA
IC13	8-759-930-49	CA3049T ; RCA
IC14	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC15	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC16	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC17	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC18	8-759-001-15	MC10115L, ECL ; MOTOROLA
IC19	8-759-001-15	MC10115L, ECL ; MOTOROLA
IC20	8-759-957-09	FT5709M ; FUJITSU
IC21	8-759-906-85	AM685DL ; ADVANCED MICRO DEVICE
IC22	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)
IC23	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC24	8-759-001-76	MC10176L, ECL ; MOTOROLA
IC25	8-759-930-49	CA3049T ; RCA
IC26	8-759-930-49	CA3049T ; RCA
IC27	8-759-930-49	CA3049T ; RCA
IC28	8-759-930-49	CA3059T ; RCA
IC29	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC30	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC31	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC32	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA
IC33	8-759-001-15	MC10115L, ECL ; MOTOROLA
IC34	8-759-001-15	MC10115L, ECL ; MOTOROLA
IC35	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)
IC36	8-759-930-54	CA3054 ; RCA
IC37	8-759-957-09	FT5709M ; FUJITSU
IC38	8-759-906-85	AM685DL ; ADVANCED MICRO DEVICE
Q1	8-729-368-90	2SC689H
Q2	8-769-193-09	2SK43
Q3	8-729-368-90	2SC689H
Q4	8-729-368-90	2SC689H
Q5	8-729-368-90	2SC689H
Q6	8-769-193-09	2SK43
Q7	8-769-193-09	2SK43
Q8	8-729-368-90	2SC689H
Q9	8-729-368-90	2SC689H
Q10	8-729-368-90	2SC689H
Q11	8-769-193-09	2SK43
R12	1-214-526-00	METAL 51 1/8W 1%
R14	1-214-526-00	METAL 51 1/8W 1%
R15	1-214-655-00	METAL 3.2K 1/8W 0.25%
R17	1-214-656-00	METAL 6.4K 1/8W 0.25%
R18	1-214-653-00	METAL 800 1/8W 0.25%
R20	1-214-337-00	METAL 1.6K 1/8W 0.1%

Ref. No.	Part No.	Description
(AD-6 BOARD, CONTINUED)		
R28	1-214-557-00	METAL 1K 1/8W 1%
R29	1-214-557-00	METAL 1K 1/8W 1%
R65	1-214-526-00	METAL 51 1/8W 1%
R67	1-214-526-00	METAL 51 1/8W 1%
R68	1-214-655-00	METAL 3.2K 1/8W 0.25%
R70	1-214-656-00	METAL 6.4K 1/8W 0.25%
R71	1-214-653-00	METAL 800 1/8W 0.25%
R73	1-214-337-00	METAL 1.6K 1/8W 0.1%
R81	1-214-557-00	METAL 1K 1/8W 1%
R82	1-214-557-00	METAL 1K 1/8W 1%
RN1	1-231-513-00	1.5K x 4, 1/8W
RN2	1-231-513-00	1.5K x 4, 1/8W
RN3	1-231-513-00	1.5K x 4, 1/8W
RN4	1-231-513-00	1.5K x 4, 1/8W
RN5	1-231-446-00	51 x 8, 1/8W
RN6	1-231-446-00	51 x 8, 1/8W
RN7	1-231-502-00	510 x 4, 1/8W
RN8	1-231-502-00	510 x 4, 1/8W
RN9	1-231-456-00	150Ω x 4 + 0.01μF
RN10	1-231-456-00	150Ω x 4 + 0.01μF
RN11	1-231-456-00	150Ω x 4 + 0.01μF
RN12	1-231-456-00	150Ω x 4 + 0.0μF
RN13	1-231-446-00	51 x 8, 1/8W
RN14	1-231-446-00	51 x 8, 1/8W
RN15	1-231-502-00	510 x 4, 1/8W
RN16	1-231-502-00	510 x 4, 1/8W
RN17	1-231-456-00	150Ω x 4 + 0.01μF
RN18	1-231-456-00	150Ω x 4 + 0.01μF
RN19	1-231-456-00	150Ω x 4 + 0.01μF
RN20	1-231-456-00	150Ω x 4 + 0.01μF
RN21	1-231-463-00	47 x 8, 1/8W, DIP
RN22	1-231-463-00	47 x 8, 1/8W, DIP
RN23	1-231-463-00	47 x 8, 1/8W, DIP
RN24	1-231-463-00	47 x 8, 1/8W, DIP
T1	1-446-329-00	TRANSFORMER, PULSE
T2	1-446-330-00	TRANSFORMER, PULSE
T3	1-446-330-00	TRANSFORMER, PULSE
T4	1-446-329-00	TRANSFORMER, PULSE
T5	1-446-329-00	TRANSFORMER PULSE
TP1 to TP3	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP
VR1	1-224-937-00	VAR, METAL 1K
VR2	1-224-934-00	VAR, METAL 100
VR3	1-224-937-00	VAR, METAL 1K
VR4, 5	1-224-927-00	VAR, METAL 1K
VR6, 7	1-224-936-00	VAR, METAL 500
VR8	1-224-934-00	VAR, METAL 100
VR9	1-224-935-00	VAR, METAL 200
VR10, 11	1-224-936-00	VAR, METAL 500
VR12	1-224-934-00	VAR, METAL 100
VR13	1-224-935-00	VAR, METAL 200

Ref. No.	Part No.	Description

AD-7 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-669-00	CERAMIC 0.01 50V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6257-049-A	AD-7(P) BOARD, COMPLETE (PAL)
---	A-6257-052-A	AD-7(S) BOARD, COMPLETE (SECAM)
C33	1-109-534-00	MICA 91PF 5% 100V
C35	1-107-070-00	MICA 24PF 5% 50V
C41	1-109-534-00	MICA 91PF 5% 100V
C48	1-107-074-00	MICA 36PF 5% 50V
C49	1-107-074-00	MICA 36PF 5% 50V
C50	1-107-074-00	MICA 36PF 5% 50V
C51	1-107-074-00	MICA 36PF 5% 50V
C52	1-107-074-00	MICA 36PF 5% 50V
C53	1-107-074-00	MICA 36PF 5% 50V
C55	1-107-077-00	MICA 47PF 5% 50V
C56	1-107-068-00	MICA 20PF 5% 50V
C57	1-109-531-00	MICA 68PF 5% 100V
C58	1-109-531-00	MICA 68PF 5% 100V
C59	1-109-531-00	MICA 68PF 5% 100V
C60	1-109-531-00	MICA 68PF 5% 100V
C61	1-109-531-00	MICA 68PF 5% 100V
C62	1-107-061-00	MICA 10PF 5% 50V
C64	1-107-072-00	MICA 30PF 5% 50V
C66	1-109-531-00	MICA 68PF 5% 100V
C68	1-109-531-00	MICA 68PF 5% 100V
C100	1-109-531-00	MICA 68PF 5% 100V
C101	1-109-531-00	MICA 68PF 5% 100V
C102	1-107-074-00	MICA 36PF 5% 50V
D1	8-719-102-51	1SZ51
D2, 3, 4, 5	8-719-908-10	FOUR DIODES QSCH-1754
	This part is supplied as a set of four diodes. Replace four diodes at the same time.	
D6	8-719-815-55	1S1555
D7	8-719-815-80	1S1587
D8	8-719-151-07	RD5.1E-B
FB1 to FB8	1-535-178-00	FERRITE BEADS
IC1	8-759-900-04	SN74LS04N, TTL ; TI
IC2	8-759-902-73	SN74LS273N, TTL ; TI
IC3	8-759-902-73	SN74LS273N, TTL ; TI
IC4	8-759-632-74	M53274P, TTL (SN7474N ; TI)
IC5	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)

Ref. No.	Part No.	Description
(AD-7 BOARD, CONTINUED)		
IC6	8-759-300-25	HD10125, ECL(MC10125L; MOTOROLA)
IC7	8-759-301-31	HD10131, ECL (MC10131L; MOTOROLA)
IC8	8-759-001-76	MC10176L, ECL ; MOTOROLA
IC9	8-759-930-49	CA3049T ; RCA
IC10	8-759-930-49	CA3049T ; RCA
IC11	8-759-930-49	CA3049T ; RCA
IC12	8-759-930-49	CA3049T ; RCA
IC13	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC14	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC15	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC16	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC17	8-759-001-15	MC10115L, ECL ; MOTOROLA
IC18	8-759-001-15	MC10115L, ECL ; MOTOROLA
IC19	8-759-300-25	HD10125, ECL (MC10125L; MOTOROLA)
IC20	8-759-930-54	CA3054 ; RCA
IC21	8-759-301-05	HD10105, ECL (MC10105L ; MOTOROLA)
IC22	8-759-301-05	HD10105, ECL (MC10105L ; MOTOROLA)
IC23	8-759-301-05	HD10105, ECL (MC10105L ; MOTOROLA)
IC24	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC25	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC26	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC27	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC28	8-759-957-09	FT5709M ; FUJITSU
IC29	8-759-906-85	AM685DL ; ADVANCED MICRO DEVICE
LPF1	1-231-481-00	LOW-PASS ((ONLY PAL)
LPF2	1-231-481-00	LOW-PASS
Q1	8-729-368-90	2SC689H
Q2	8-723-304-00	2SK43-4
Q3	8-729-368-90	2SC689H
Q4	8-729-368-90	2SC689H
Q5	8-723-304-00	2SK43-4
Q6	8-729-368-90	2SC689H
R5	1-214-526-00	METAL 51 1/8W 1%
R6	1-214-526-00	METAL 51 1/8W 1%
R8	1-214-655-00	METAL 3.2K 1/8W 0.25%
R10	1-214-656-00	METAL 6.4K 1/8W 0.25%
R11	1-214-653-00	METAL 800 1/8W 0.25%
R13	1-214-337-00	METAL 1.6K 1/8W 0.1%
R20	1-214-557-00	METAL 1K 1/8W 1%
R21	1-214-557-00	METAL 1K 1/8W 1%
RN1	1-231-513-00	1.5K x 4, 1/8W
RN2	1-231-513-00	1.5K x 4, 1/8W
RN3	1-231-513-00	1.5K x 4, 1/8W
RN4	1-231-446-00	51 x 8, 1/8W
RN6	1-231-502-00	510 x 4, 1/8W

Ref. No.	Part No.	Description
(AD-7 BOARD, CONTINUED)		
RN8	1-231-456-00	150Ω x 4 + 0.01μF
RN9	1-231-456-00	150Ω x 4 + 0.01μF
RN10	1-231-446-00	51 x 8, 1/8W
RN11	1-231-456-00	150Ω x 4 + 0.01μF
RN12	1-231-502-00	510 x 4, 1/8W
RN13	1-231-456-00	150Ω x 4 + 0.01μF
RN14	1-231-447-00	510 x 8, 1/8W
RN15	1-231-447-00	510 x 8, 1/8W
RN16	1-231-447-00	510 x 8, 1/8W
RN17	1-231-502-00	510 x 4, 1/8W
RN18	1-231-502-00	510 x 8, 1/8W
RN19	1-231-502-00	510 x 8, 1/8W
RN20	1-231-463-00	47 x 8, 1/8W, DIP
RN21	1-231-463-00	47 x 8, 1/8W, DIP
RN22	1-231-502-00	510 x 8, 1/8W
RN23	1-231-502-00	510 x 8, 1/8W
RN24	1-231-521-00	3.3K x 4, 1/8W
T1	1-446-329-00	TRANSFORMER, PULSE
T2	1-446-329-00	TRANSFORMER, PULSE (ONLY PAL)
T3	1-446-330-00	TRANSFORMER, PULSE
TP1	2-252-662-00	TERMINAL, TP
TPE1 to TPE4	2-252-662-00	TERMINAL, TP
VR1	1-224-937-00	VAR, METAL 1K
VR2	1-224-927-00	VAR, METAL 1K
VR3,4	1-224-936-00	VAR, METAL 500
VR5	1-224-934-00	VAR, METAL 100
VR6	1-224-935-00	VAR, METAL 200

AP-1 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6257-039-A	AP-1 BOARD, COMPLETE (ONLY PAL)
BPF1	1-231-471-00	BANDPASS 17.73MHz
C3	1-107-075-00	MICA 39PF 5% 50V
C4	1-109-539-00	MICA 150PF 5% 100V
C5	1-107-075-00	MICA 39PF 5% 50V
C6	1-109-539-00	MICA 150PF 5% 100V
C7	1-109-562-00	MICA 0.0011 5% 100V

Ref. No.	Part No.	Description
(AP-1 BOARD, CONTINUED)		
C8	1-109-562-00	MICA 0.0011 5% 100V
C9	1-108-595-00	MYLAR 0.047 5% 50V
C10	1-123-330-00	ELECT 22 25V
C11	1-123-330-00	ELECT 22 25V
C12	1-109-551-00	MICA 440PF 5% 100V
C19	1-108-579-00	MYLAR 0.01 5% 50V
C20	1-109-589-00	MICA 0.0022μF 5% 500V
C22	1-131-199-00	TANTALUM 10 10% 16V
C23	1-131-199-00	TANTALUM 10 10% 16V
C45	1-107-075-00	MICA 39PF 5% 50V
C46	1-109-539-00	MICA 150PF 5% 100V
C47	1-107-075-00	MICA 39PF 5% 50V
C48	1-109-539-00	MICA 150PF 5% 100V
C49	1-109-553-00	MICA 470PF 5% 100V
C50	1-109-553-00	MICA 470PF 5% 100V
C51	1-109-589-00	MICA 0.0022μF 5% 500V
C52	1-108-601-00	MYLAR 0.082 5% 50V
C54	1-109-531-00	MICA 68PF 5% 100V
C55	1-102-679-00	CERAMIC 120PF (PH) 5% 50V
C56	1-131-215-00	TANTALUM 1 10% 35V
C59	1-131-215-00	TANTALUN 1 10% 35V
C60	1-107-066-00	MICA 16PF 5% 50V
C61	1-107-073-00	MICA 33PF 5% 50V
C62	1-107-066-00	MICA 16PF 5% 50V
C66	1-107-072-00	MICA 30PF 5% 50V
C69	1-109-547-00	MICA 330PF 5% 100V
C70	1-109-547-00	MICA 330PF 5% 100V
C71	1-108-555-00	MYLAR 0.001 5% 50V
C72	1-109-542-00	MICA 220PF 5% 100V
C92	1-123-333-00	ELECT 100 25V
C94	1-123-333-00	ELECT 100 25V
C96	1-123-333-00	ELECT 100 25V
C98	1-123-333-00	ELECT 100 25V
C99	1-107-102-00	MICA 5PF ±0.5PF 50V
C100	1-107-102-00	MICA 5PF ±0.5PF 50V
D1	8-719-815-55	1S1555
D2	8-719-815-55	1S1555
D3	8-719-815-55	1S1555
D4	8-719-815-55	1S1555
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-759-907-93	μA796HC-B
IC2	8-759-145-57	μPC4557C ; NEC
IC3	8-759-906-07	TL607CP, P-MOS ; TI
IC4	8-759-906-07	TL607CP, P-MOS ; TI
IC5	8-759-145-57	μPC4557C ; NEC
IC6	8-739-145-57	μPC4557C ; NEC
IC7	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC8	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC9	8-759-145-57	μPC4557C ; NEC
IC10	8-759-145-57	μPC4557C ; NEC

Ref. No.	Part No.	Description
(AP-1 BOARD, CONTINUED)		
IC11	8-759-901-91	SN74LS191N, TTL ; TI
IC12	8-759-901-91	SN74LS191N, TTL ; TI
IC13	8-759-900-74	SN74LS74N, TTL ; TI
IC14	8-759-900-14	SN74LS14N, TTL ; TI
IC15	8-759-900-00	SN74LS00N, TTL ; TI
IC16	8-759-974-86	SN7486N, TTL ; TI
IC17	8-759-900-74	SN74LS74N, TTL ; TI
IC18	8-759-903-93	SN74LS393N, TTL ; TI
IC19	8-759-900-74	SN74LS74N, TTL ; TI
IC20	8-759-907-93	μA796HC-B
IC21	8-759-990-82	TL082CP ; TI
IC22	8-759-906-07	TL607CP, P-MOS ; TI
IC23	8-759-906-07	TL607CP, P-MOS ; TI
IC24	8-759-145-57	μPC4557C ; NEC
IC25	8-759-145-57	μPC4557C ; NEC
IC26	8-759-016-48	MC1648P, ECL ; MOTOROLA
IC27	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC28	8-759-907-93	μA796HC-B
IC29	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC30	8-759-902-21	SN74LS221N, TTL ; TI
IC31	8-759-902-21	SN74LS221N, TTL ; TI
IC32	8-759-900-00	SN74LS00N, TTL ; TI
IC33	8-759-901-57	SN74LS157N, TTL ; TI
IC34	8-759-906-07	TL607CP, P-MOS ; TI
L1	1-407-171-XX	MICRO 150μH
L2	1-407-171-XX	MICRO 150μH
L3	1-407-171-XX	MICRO 150μH
L4	1-407-171-XX	MICRO 150μH
L5	1-407-184-XX	MICRO 3.3μH
L6	1-407-163-XX	MICRO 33μH
L7	1-407-163-XX	MICRO 33μH
R92	1-246-529-00	CARBON 220K 1/4W 5%
SW1	1-553-441-00	SWITCH, TOGGLE
TP1 to TP13	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP
VC1	8-719-713-93	1S2139C, VARICAP
VC2	8-719-713-93	1S2139C, VARICAP
VL1	1-407-565-00	VAR 2.2μH
VL2	1-407-570-00	VAR 15μH
VR1	1-224-936-00	VAR, METAL 500
VR2	1-224-937-00	VAR, METAL 1K
VR3	1-224-937-00	VAR, METAL 1K
VR4	1-224-940-00	VAR, METAL 10K
VR5	1-224-940-00	VAR, METAL 10K
VR6	1-224-940-00	VAR, METAL 10K
VR7	1-226-015-00	VAR, METAL 20K
X1	1-527-521-00	CRYSTAL 17.734475MHz
X2	1-527-516-00	CRYSTAL 14.334475MHz

Ref. No.	Part No.	Description

BC-3 BOARD (SECAM)

NOTE 1. Resistors that are not listed in the following list are are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
———	A-6257-044-00	BC-3 BOARD, COMPLETE (ONLY SECAM)
C3	1-131-199-00	TANTALUM 10 10% 16V
C4	1-131-199-00	TANTALUM 10 10% 16V
C7	1-109-534-00	MICA 9-¼F 5% 100V
C11	1-131-199-00	TANTALUM 10 10% 16V
C12	1-131-199-00	TANTALUM 10 10% 16V
C15	1-109-534-00	MICA 91PF 5% 100V
C18	1-109-549-00	MICA 390PF 5% 100V
C19	1-109-547-00	MICA 330PF 5% 100V
C20	1-108-563-00	MYLAR 0.0022 5% 50V
C24	1-108-555-00	MYLAR 0.001 5% 50V
C25	1-109-542-00	MICA 220PF 5% 100V
C27	1-131-195-00	TANTALUM 33 10% 10V
C25	1-109-542-00	MICA 220PF 5% 100V
C39	1-108-587-00	MYLAR 0.022 5% 50V
C44	1-108-563-00	MYLAR 0.0022 5% 50V
D1	8-719-151-07	RD5.1E-B
D2	8-719-151-07	RD5.1E-B
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-749-936-51	BX365A (A7015)
IC2	8-759-906-07	TL607CP, P-MOS ; TI
IC3	8-759-145-57	μPC4557C ; NEC
IC4	8-759-930-54	CA3054 ; RCA
IC5	8-749-936-51	BX365A (A7015)
IC6	8-759-906-07	TL607CP, P-MOS ; TI
IC7	8-759-145-57	μPC4557C ; NEC
IC8	8-759-930-54	CA3054 ; RCA
IC9	8-759-902-21	SN74LS221N, TTL ; TI
IC10	8-759-900-74	SN74LS74N, TTL ; TI
IC11	8-759-900-08	SN74LS08N, TTL ; TI
IC12	8-759-902-21	SN74LS221N, TTL ; TI
IC13	8-759-951-10	SN75110AN ; TI
IC14	8-759-902-21	SN74LS221N, TTL ; TI
IC15	8-759-900-00	SN74LS00N, TTL ; TI
IC16	8-759-900-04	SN74LS04N, TTL ; TI
IC17	8-759-901-64	SN74LS164N, TTL ; TI
IC18	8-759-901-53	SN74LS153N, TTL ; TI
IC19	8-759-901-23	SN74LS123N, TTL ; TI
IC20	8-759-901-64	SN74LS164N, TTL ; TI
IC21	8-759-901-64	SN74LS164N, TTL ; TI
IC22	8-759-900-04	SN74LS04N, TTL ; TI

Ref. No.	Part No.	Description
(BC-3 BOARD, CONTINUED)		
Q1	8-724-375-01	2SC403C
Q2	8-724-375-01	2SC403C
R7	1-246-545-00	CARBON 1M 1/4W 5%
R24	1-246-545-00	CARBON 1M 1/4W 5%
S1	1-552-875-00	DIGITAL
TP1 to TP19	2-252-662-00	TERMINAL, TP
TPE1 to TPE4	2-252-662-00	TERMINAL, TP
VR1	1-224-940-00	VAR, METAL 10K
VR2	1-224-940-00	VAR, METAL 10K
VR3	1-224-941-00	VAR, METAL 20K
VR4	1-224-940-00	VAR, METAL 10K

BE-1 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
	A-6257-066-A	COMPLETE PCB, BE-1
C1	1-107-080-00	MICA 62PF 5% 50V
C2	1-107-083-00	MICA 82PF 5% 50V
C4	1-107-202-00	MICA 10PF 5% 500V
C5	1-107-202-00	MICA 10PF 5% 500V
C6	1-108-595-00	MYLAR 0.047 5% 50V
C7 to C9	1-123-356-00	ELECT 10 50V
C21 to C24	1-123-356-00	ELECT 10 50V
C25	1-107-077-00	MICA 47PF 5% 50V
C28	1-109-549-00	MICA 390PF 5% 100V
C29	1-109-542-00	MICA 220PF 5% 100V
C36	1-109-539-00	MICA 150PF 5% 100V
C37	1-123-333-00	ELECT 100 25V
C39	1-123-333-00	ELECT 100 25V
C41	1-123-333-00	ELECT 100 25V
C43	1-123-333-00	ELECT 100 25V
CN1	1-560-191-00	RECEPTACLE 40P MALE
D1	8-719-156-25	RD5.6E-B2Z
D2 to D6	8-719-815-80	1S1587
DL1	1-415-214-00	DELAY LINE 2H(127.7μSEC) 7.16MHz
DL2	1-415-121-00	DELAY LINE 100nSEC
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-749-936-51	BX365A (A7015): SONY
IC2	8-749-936-51	BX365A (A7015): SONY
IC3	8-759-906-01	TL601CP; TI
IC4	8-759-145-57	μPC4557C; NEC
IC5	8-749-936-61	BX366A (A7021): SONY
IC6	8-759-907-93	μA796HC-B; FSC
IC7	8-749-936-61	BX366A (A7021): SONY
IC8	8-759-907-34	μA733HC; FSC
IC9	8-759-907-93	μA796HC-B; FSC
IC10	8-759-001-16	MC10116L, ECL; MOTOROLA
IC11	8-749-936-51	BX365A (A7015): SONY
IC12	8-749-936-51	BX365A (A7015): SONY
IC13	8-759-907-93	μA796HC-B; FSC

Ref. No.	Part No.	Description
(BE-1 BOARD, CONTINUED)		
IC14	8-759-632-06	M53206P, TTL (SN7406N; TI)
IC15	8-759-001-16	MC10116L, ECL, MOTOROLA
IC16	8-759-902-21	SN74LS221N, TTL; TI
IC17	8-759-907-93	μA796HC-B, FSC
IC18	8-759-925-10	TL510CP; TI
IC19	8-759-901-23	SN74LS123N, TTL; TI
IC20	8-759-900-74	SN74LS74AN, TTL; TI
IC21	8-759-145-57	μPC4557C; NEC
IC22 to IC25	8-759-925-10	TL510CP; TI
IC26	8-759-900-00	SN74LS00N, TTL; TI
IC27	8-759-301-02	HD10102, ECL (MC10102L; MOTOROLA)
L1 to L5	1-407-161-XX	MICRO, 22μH
LPF1	1-231-716-00	LOW-PASS
Q1	8-729-629-12	2SC2291
Q2	8-724-375-01	2SC403C
R18	1-246-545-00	CARBON 1M 1/4W 5%
RL1	1-515-342-21	RELAY, REED 12V 26mA
RL2	1-515-342-21	RELAY, REED 12V 26mA
RN1 to RN3	1-231-504-00	620 x 4 1/8W
S1	1-553-441-00	SWITCH, TOGGLE
S2	1-552-508-00	DIP 2
S3	1-516-925-21	DIP 8
S4	1-552-508-00	DIP 2
TP1 to TP11	2-252-662-00	TERMINAL, TP
TPE2 to TPE5	2-252-662-00	TERMINAL, TP
VL1	1-407-576-00	VAR 220μH
VL2	1-407-576-00	VAR 220μH
VL3	1-407-564-00	VAR 1.5μH
VL4	1-407-567-00	VAR 4.7μH
VR1	1-224-935-00	VAR, METAL 200
VR2	1-224-936-00	VAR, METAL 500
VR3	1-224-940-00	VAR, METAL 10K
VR4	1-224-934-00	VAR, METAL 100
VR5	1-224-935-00	VAR, METAL 200
VR6	1-224-936-00	VAR, METAL 500
VR7	1-224-936-00	VAR, METAL 500
VR8	1-224-940-00	VAR, METAL 10K
VR9	1-224-938-00	VAR, METAL 2K
VR10	1-224-935-00	VAR, METAL 200

Ref. No.	Part No.	Description

CK-4 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	**TANTALUM 22 10% 16V**
	1-161-670-00	**CERAMIC 0.022 50V**
---	A-6259-076-A	CK-4 BOARD, COMPLETE
C1	**1-109-556-00**	**MICA 620PF 5% 100V**
C2	**1-107-065-00**	**MICA 15PF 5% 50V**
C3	**1-107-069-00**	**MICA 22PF 5% 50V**
C4	**1-107-069-00**	**MICA 22PF 5% 50V**
C10	**1-109-561-00**	**MICA 0.001 5% 100V**
C14	**1-131-238-00**	**TANTALUM 10 10% 25V**
C15	**1-109-561-00**	**MICA 0.001 5% 100V**
C16	**1-131-211-00**	**TANTALUM 0.22 10% 35V**
C20	**1-108-595-00**	**MYLAR 0.047 5% 50V**
C22	**1-109-547-00**	**MICA 330PF 5% 100V**
C23	**1-109-554-00**	**MICA510PF 5% 100V**
C24	**1-109-561-00**	**MICA 0.001 5% 100V**
C25	**1-109-535-00**	**MICA 100PF 5% 100V**
C26	**1-109-561-00**	**MICA 0.001 5% 100V**
C29	**1-108-579-00**	**MYLAR 0.01 5% 50V**
C30	**1-108-599-00**	**MYLAR 0.068 5% 50V**
C31	**1-109-561-00**	**MICA 0.001 5% 100V**
C32	**1-108-563-00**	**MYLAR 0.0022 5% 50V**
C33	**1-131-215-00**	**TANTALUM 1 10% 35V**
C45	**1-109-535-00**	**MICA 100PF 5% 100V**
C64	**1-109-535-00**	**MICA 100PF 5% 100V**
D1	**8-719-713-93**	**1S2139C, VARICAP**
D2	**8-719-709-25**	**1S1925P**
D3	**8-719-815-55**	**1S1555**
FB1 to FB7	**1-535-178-00**	**FERRITE BEADS**
IC1	**8-759-100-91**	**μPC91A ; NEC**
ICA1	**8-759-900-00**	**SN74LS00N, TTL ; TI**
ICA2	**8-759-900-74**	**SN70LS74N, TTL ; TI**
ICA3	**8-759-901-23**	**SN74LS123N, TTL ; TI**
ICB1	**8-759-901-57**	**SN74LS157N, TTL ; TI**
ICB2	**8-759-901-64**	**SN74LS164N, TTL ; TI**
ICB3	**8-759-900-74**	**SN74LS74N, TTL ; TI**
ICB4	**8-759-900-08**	**SN74LS08N, TTL ; TI**
ICB5	**8-759-900-85**	**SN74LS85N, TTL ; TI**

Ref. No.	Part No.	Description
(CK-4 BOARD, CONTINUED)		
ICC1	8-759-901-61	SN74LS161N, TTL ; TI
ICC2	8-759-900-08	SN74LS08N, TTL ; TI
ICC3	8-759-900-04	SN74LS04N, TTL ; TI
ICC4	8-759-941-63	SN74163N, TTL ; TI
ICC5	8-759-900-08	SN74LS08N, TTL ; TI
ICD1	8-759-900-08	SN74LS08N, TTL ; TI
ICD2	8-759-941-63	SN74163N, TTL ; TI
ICD3	8-759-900-74	SN74LS74N, TTL ; TI
ICD4	8-759-900-11	SN74LS11N, TTL ; TI
ICE1	8-759-901-64	SN74LS164N, TTL ; TI
ICE2	8-759-900-00	SN74LS00N, TTL ; TI
ICE3	8-759-902-21	SN74LS221N, TTL ; TI
ICE4	8-759-902-21	SN74LS221N, TTL ; TI
ICF1	8-759-900-04	SN74LS04N, TTL ; TI
ICF2	8-759-900-74	SN74LS74N, TTL ; TI
ICF3	8-759-943-93	SN74393N, TTL ; TI
ICF4	8-759-900-08	SN74LS08N, TTL ; TI
ICF5	8-759-902-21	SN74LS221N, TTL ; TI
ICG3	8-759-632-06	M53206P, TTL (SN7406N ; TI)
ICG4	8-759-900-00	SN74LS00N, TTL ; TI
ICH1	8-759-981-00	TL081CP ; TI
ICH3	8-759-902-21	SN74LS221N, TTL ; TI
ICH4	8-759-902-21	SN74LS221N, TTL ; TI
ICH5	8-759-901-63	SN74LS163NN, TTL ; TI
ICI3	8-759-900-20	SN74LS20N, TTL ; TI
ICI4	8-759-901-75	SN74LS175N, TTL ; TI
ICI5	8-759-901-63	SN74LS163AN, TTL ; TI
ICJ1	8-759-981-00	TL081CP ; TI
ICJ2	8-759-981-00	TL081CP ; TI
ICJ3	8-759-901-63	SN74LS163AN, TTL ; TI
ICJ4	8-759-900-30	SN74LS30N, TTL ; TI
ICJ5	8-759-901-63	SN74LS163AN, TTL ; TI
ICK2	8-759-941-07	SN74107N, TTL ; TI
ICK3	8-759-901-63	SN74LS163AN, TTL ; TI
ICK4	8-759-900-10	SN74LS10N, TTL ; TI
ICK5	8-759-901-63	SN74LS163AN, TTL ; TI
ICL2	8-759-900-04	SN74LS04N, TTL ; TI
ICL3	8-759-900-11	SN74LS11N, TTL ; TI
ICL4	8-759-901-64	SN74LS164N, TTL ; TI
ICL5	8-759-941-21	SN74121N, TTL ; TI
Q1	8-724-375-01	2SC403C
Q2	8-724-375-01	2SC403C
Q3	8-729-658-32	2SC1583
Q4	8-724-375-01	2SC403C
Q5	8-724-375-01	2SC403C
R19	1-246-525-00	CARBON 150K 1/4W 5%
T1	1-425-950-00	TRANSFORMER PULSE
TP1 to TP12	2-252-662-00	TERMINAL, TP
TPE1 to TPE6	2-252-662-00	TERMINAL, TP

Ref. No.	Part No.	Description
(CK-4 BOARD, CONTINUED)		
VL1	1-407-567-00	VAR, 4.7μH
VR1	1-224-941-00	VAR, METAL 20K
VR2	1-224-939-00	VAR, METAL 5K
VR3	1-224-939-00	VAR, METAL 5K
VR5	1-224-942-00	VAR, METAL 50K

DA-4 BOARD (ONLY SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-669-00	CERAMIC 0.01 50V
	1-161-670-00	CERAMIC 0.022 50V
----	A-6257-050-A	DA-4 BOARD, COMPLETE (ONLY SECAM)
C12	1-109-535-00	MICA 100PF 5% 100V
C13	1-107-070-00	MICA 24PF 5% 50V
C17	1-108-559-00	MYLAR 0.0015 5% 50V
C21	1-109-543-00	MICA 240PF 5% 100V
C22	1-131-236-00	TANTALUM 1 10% 25V
C32	1-109-534-00	MICA 91PF 5% 100V
C34	1-107-076-00	MICA 43PF 5% 50V
C35	1-109-540-00	MICA 180PF 5% 100V
C45	1-131-236-00	TANTALUM 1 10% 25V
C46	1-131-236-00	TANTALUM 1 10% 25V
C49	1-109-535-00	MICA 100PF 5% 100V
C50	1-107-070-00	MICA 24PF 5% 50V
C57	1-109-528-00	MICA 51PF 5% 100V
C58	1-109-528-00	MICA 51PF 5% 100V
C59	1-109-528-00	MICA 51PF 5% 100V
D1	8-719-908-10	5082-2810
D2	8-719-908-10	5082-2810
D3	8-719-908-10	5082-2810
D4	8-719-908-10	5082-2810
D5	8-719-815-80	1S1587
D6	8-719-709-25	1S1925P
D7	8-719-709-25	1S1925P
D8	8-719-815-80	1S1587
D9	8-719-908-10	5082-2810
D10	8-719-908-10	5082-2810
D11	8-719-908-10	5082-2810
D12	8-719-908-10	5082-2810
D13	8-719-815-80	1S1587
DL1	1-415-183-00	DELAY LIEN 113n SEC
FB1 to FB19	1-535-178-00	FERRITE BEADS

Ref. No.	Part No.	Description
(DA-4 BOARD, CONTINUED)		
IC1	8-759-902-73	SN4LS273N, TILL ; TI
IC2	8-759-908-00	DAC08HQ ; PME
IC3	8-759-905-92	NE592K ; SIGNETICS
IC4	8-759-900-04	SN74LS04N, TTL ; TI
IC5	8-759-900-04	SN74LS04N, TTL ; TI
IC6	8-759-900-00	SN74LS00N, TTL ; TI
IC7	8-759-900-04	SN74LS04N, TTL ; TI
IC9	8-759-900-00	SN74LS00N, TTL ; TI
IC10	8-759-132-40	μPC324C ; NEC
IC11	8-759-145-57	μPC4557C ; NEC
IC12	8-759-907-93	μA796HC-B
IC13	8-749-936-51	BX365A (A7015)
IC14	8-759-906-97	TL607CP, P-MOS ; TI
IC15	8-759-145-57	μPC4557C ; NEC
IC16	8-759-901-57	SN74LS157N, TTL ; TI
IC17	8-759-902-73	SN74LS273N, TTL ; TI
IC18	8-759-902-73	SN74LS273N, TTL ; TI
IC19	8-759-908-00	DAC08HQ ; PMI
IC20	8-749-936-51	BX365A (A7015)
IC21	8-759-901-57	SN74LS157N, TTL ; TI
IC22	8-759-900-04	SN74LS04N, TTL ; TI
IC23	8-759-900-00	SN74LS00N, TTL ; TI
IC24	8-759-900-04	SN74LS04N, TTL ; TI
IC25	8-759-900-74	SN74LS74N, TTL ; TI
IC26	8-759-902-21	SN74LS221N, TTL ; TI
IC28	8-759-902-21	SN74LS221N, TTL ; TI
L1	1-407-182-XX	MICRO 2.2μH
LPF1	1-231-479-00	LOW-PASS
LPF2	1-231-478-00	LOW-PASS
Q1	8-729-368-90	2SC689H
Q2	8-729-368-90	2SC689H
Q3	8-723-303-20	2SK43-3A
Q4	8-724-375-01	2SC403C
Q5	8-724-375-01	2SC403C
Q6	8-724-375-01	2SC403C
Q7	8-724-375-01	2SC403C
Q8	8-724-375-01	2SC403C
Q9	8-724-375-01	2SC403C
Q10	8-729-612-77	2SA1027R
Q11	8-761-622-00	2SC1636
Q12	8-729-612-77	2SA1027R
Q13	8-724-375-01	2SC403C
Q14	8-729-612-77	2SA1027R
Q15	8-729-612-77	2SA1027R
Q16	8-729-612-77	2SA1027R
Q17	8-729-658-32	2SC1583
Q18	8-729-612-77	2SA1027R
Q19	8-761-622-00	2SC1636
Q20	8-729-368-90	2SC689H
Q21	8-723-303-20	2SK43-3A
Q22	8-724-375-01	2SC403C
Q23	8-729-368-90	2SC689H
Q24	8-761-622-00	2SC1636

Ref. No.	Part No.	Description
(DA-4 BOARD, CONTINUED)		
R26	1-246-529-00	CARBON 220K 1/4W 5%
R86	1-246-545-00	CARBON 1M 1/4W 5%
R88	1-246-529-00	CARBON 220K 1/4W 5%
R112	1-246-529-00	CARBON 220K 1/4W 5%
RN1	1-231-450-00	3.3K x 8
RN2	1-231-450-00	3.3K x 8
RN3	1-231-450-00	3.3K x 8
RN4	1-231-450-00	3.3K x 8
SW1	1-553-441-00	SWITCH, TOGGLE
T1	1-446-330-00	TRANSFORMER, PULSE
T2	1-446-330-00	TRANSFORMER, PULSE
TP1 to TP12	2-252-662-00	TERMINAL, TP
TPE1 to TPE6	2-252-662-00	TERMINAL, TP
VR1	1-224-939-00	VAR, METAL 5K
VR2	1-224-934-00	VAR, METAL 100
VR3	1-224-936-00	VAR, METAL 500
VR4	1-224-930-00	VAR, METAL 10K
VR5	1-224-931-00	VAR, METAL 20K
VR6	1-224-937-00	VAR, METAL 1K
VR7	1-224-940-00	VAR, METAL 10K

DA-5 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

1-131-441-00	TANTALUM 22 10% 16V
1-161-669-00	CERAMIC 0.01 50V
1-161-670-00	CERAMIC 0.022 50V

---	A-6257-051-A	DA-5 BOARD (ONLY PAL)
C3	1-109-528-00	MICA 51PF 5% 100V
C4	1-109-528-00	MICA 51PF 5% 100V
C7	1-109-527-00	MICA 47PF 5% 100V
C9	1-109-528-00	MICA 51PF 5% 100V
C14	1-131-215-00	TANTALUM 1 10% 35V
C16	1-131-215-00	TANTALUM 1 10% 35V
C20	1-109-535-00	MICA 100PF 5% 100V
C23	1-107-070-00	MICA 24PF 5% 50V
C26	1-131-215-00	TANTALUM 1 10% 35V
C28	1-131-215-00	TANTALUM 1 10% 35V
C33	1-109-535-00	MICA 100PF 5% 100V
C36	1-107-070-00	MICA 24PF 5% 50V
C44	1-131-215-00	TANTALUM 1 10% 35V
C46	1-108-555-00	MYLAR 0.001 5% 50V
C48	1-108-555-00	MYLAR 0.001 5% 50V
C65	1-109-535-00	MICA 100PF 5% 100V

Ref. No.	Part No.	Description
(DA-5 BOARD, CONTINUED)		
C68	1-107-070-00	MICA 24PF 5% 50V
C72	1-107-104-00	MICA 7PF ±0.5PF 50V
C79	1-108-559-00	MYLAR 0.0015 5% 50V
C83	1-131-215-00	TANTALUM 1 10% 35V
C84	1-109-543-00	MICA 240PF 5% 100V
C89	1-109-540-00	MICA 180PF 5% 100V
C90	1-107-076-00	MICA 43PF 5% 50V
C91	1-109-534-00	MICA 91PF 5% 100V
D1, 2, 3, 4	8-719-908-10	FOUR DIODES QSCH-1754
	This part is supplied as a set of four diodes.	
	Replace four diodes at the same time.	
D5	8-719-815-80	1S1587
D6, 7, 8, 9	8-719-908-10	FOUR DIODES QSCH-1754
	This part is supplied as a set of four diodes.	
	Replace four diodes at the same time.	
D10	8-719-815-80	1S1587
D11, 12, 13, 14		
	8-719-908-10	FOUR DIODES QSCH-1754
	This part is supplied as a set of four diodes.	
	Replace four diodes at the same time.	
D15	8-719-815-80	1S1587
D16	8-719-709-25	1S1925P
D17	8-719-709-25	1S1925P
D18	8-719-815-80	1S1587
DL1	1-415-183-00	DELAY LINE 113nS
FB1 to FB26	1-535-178-00	FERRITE BEADS
IC1	8-759-900-00	SN74LS00N, TTL ; TI
IC2	8-759-900-04	SN74LS04N, TTL ; TI
IC3	8-759-900-04	SN74LS04N, TTL ; TI
IC4	8-759-902-21	SN74LS221N, TTL ; TI
IC5	8-759-902-21	SN74LS221N, TTL ; TI
IC6	8-759-900-04	SN74LS04N, TTL ; TI
IC7	8-759-900-74	SN74LS74N, TTL ; TI
IC8	8-759-902-73	SN74LS273N, TTL ; TI
IC9	8-759-902-73	SN74LS273N, TTL ; TI
IC10	8-759-902-73	SN74LS273N, TTL ; TI
IC11	8-759-902-73	SN74LS273N, TTL ; TI
IC12	8-759-908-00	DAC08HQ ; PMI
IC13	8-759-908-00	DAC08HQ ; PMI
IC14	8-749-936-51	BX365A (A7015)
IC15	8-749-936-51	BX365A (A7015)
IC16	8-759-900-04	SN74LS04N, TTL ; TI
IC17	8-759-900-04	SN74LS04N, TTL ; TI
IC18	8-759-132-40	μPC324C (LM324 ; NSC)
IC19	8-759-900-00	SN74LS00N, TTL ; TI
IC20	8-759-900-04	SN74LS04N, TTL ; TI
IC21	8-759-902-21	SN74LS221N, TTL ; TI
IC22	8-759-902-73	SN74LS273N, TTL ; TI
IC23	8-759-900-00	SN74LS00N, TTL ; TI
IC24	8-759-908-00	DAC08HQ ; PMI
IC25	8-759-145-57	μPC4557C ; NEC

Ref. No.	Part No.	Description
(DA-5 BOARD, CONTINUED)		
IC26	8-759-905-92	NE592K, SIGNETICS
IC27	8-759-906-07	TL607CP, P-MOS ; TI
IC28	8-759-145-57	μPC4557C ; NEC
IC29	8-759-145-57	μPC4557C ; NEC
IC30	8-759-907-93	μA796HC-B
IC31	8-759-907-93	μA796HC-B
IC32	8-749-936-51	BX365A (A7015)
IC33	8-729-658-32	2SC1583
L1	1-407-182-XX	MICRO 2.2μH
LPF1	1-231-478-00	LOW-PASS
LPF2	1-231-478-00	LOW-PASS
LPF3	1-231-479-00	LOW-PASS
Q1	8-729-368-90	2SC689H
Q2	8-729-368-90	2SC689H
Q3	8-723-303-20	2SK43-3A
Q4	8-724-375-01	2SC403C
Q5	8-729-368-90	2SC689H
Q6	8-729-368-90	2SC689H
Q7	8-723-303-20	2SK43-3A
Q8	8-724-375-01	2SC403C
Q9	8-761-622-00	2SC1636
Q10	8-761-622-00	2SC1636
Q11	8-761-622-00	2SC1636
Q12	8-729-368-90	2SC689H
Q13	8-723-303-20	2SK43-3A
Q14	8-724-375-01	2SC4030
Q15	8-761-622-00	2SC1636
Q16	8-729-612-77	2SA1027R
Q17	8-724-375-01	2SC403C
Q18	8-724-375-01	2SC403C
Q19	8-724-375-01	2SC403C
Q20	8-724-375-01	2SC403C
Q21	8-724-375-01	2SC403C
Q22	8-729-612-77	2SA1027R
Q23	8-724-375-01	2SC403C
Q24	8-729-612-77	2SA1027R
Q25	8-729-612-77	2SA1027R
Q26	8-729-612-77	2SA1027R
Q27	8-729-612-77	2SA1027R
Q28	8-729-368-90	2SC689H
R71	1-246-529-00	CARBON 220K 1/4W 5%
R74	1-246-529-00	CARBON 220K 1/4W 5%
R79	1-246-545-00	CARBON 1M 1/4W 5%
R123	1-246-529-00	CARBON 220K 1/4W 5%
R134	1-246-529-00	CARBON 220K 1/4W 5%
RN1	1-231-450-00	3.3K x 8, 1/8W
RN2	1-231-450-00	3.3K x 8, 1/8W
RN3	1-231-450-00	3.3K x 8, 1/8W
RN4	1-231-450-00	3.3K x 8, 1/8W
SW1	1-553-441-00	SWITCH, TOGGLE

Ref. No.	Part No.	Description
(DA-5 BOARD, CONTINUED)		
T1	1-446-330-00	TRANSFORMER, PULSE
T2	1-446-330-00	TRANSFORMER, PULSE
T3	1-446-330-00	TRANSFORMER, PULSE
TP1 to TP15	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP
VR1	1-224-940-00	VAR, METAL 10K
VR2	1-224-939-00	VAR, METAL 5K
VR3	1-224-938-00	VAR, METAL 2K
VR4	1-224-938-00	VAR, METAL 2K
VR5	1-224-939-00	VAR, METAL 5K
VR6	1-224-941-00	VAR, METAL 20K
VR7	1-224-934-00	VAR, METAL 100
VR8	1-224-936-00	VAR, METAL 500
VR9	1-224-931-00	VAR, METAL 20K
VR10	1-224-930-00	VAR, METAL 10K

DC-5 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6257-046-A	DC-5 BOARD, COMPLETE
C1	1-109-529-00	MICA 56PF 5% 100V
C3	1-107-073-00	MICA 33PF 5% 50V
C11	1-108-595-00	MYLAR 0.047 5% 50V
C12	1-123-356-00	ELECT10 50V
C13	1-123-356-00	ELECT 10 50V
C22	1-108-595-00	MYLAR 0.047 5% 50V
C24	1-123-356-00	ELECT 10 50V
C25	1-123-356-00	ELECT 10 50V
C27	1-108-567-00	MYLAR 0.0033 5% 50V
C30	1-109-535-00	MICA 100PF 5% 100V
C31	1-109-549-00	MICA 390PF 5% 100V
C32	1-109-535-00	MICA 100PF 5% 100V
C33	1-109-549-00	MICA 390PF 5% 100V
C37	1-107-071-00	MICA 27PF 5% 50V
C38	1-107-104-00	MICA 7PF ±0.5PF 50V
C39	1-109-535-00	MICA 100PF 5% 100V
C41	1-109-549-00	MICA 390PF 5% 100V
C42	1-109-535-00	MICA 100PF 5% 100V
C44	1-109-535-00	MICA 100PF 5% 100V
C45	1-109-561-00	MICA 0.001 5% 100V
C49	1-109-535-00	MICA 100PF 5% 100V
C59	1-109-549-00	MICA 390PF 5% 100V
C63	1-123-333-00	ELECT 100 25V
C65	1-123-333-00	ELECT 100 25V
C67	1-123-333-00	ELECT 100 25V

Ref. No.	Part No.	Description
(DC-5 BOARD, CONTINUED)		
C69	1-123-333-00	ELECT 100 25V
C77	1-131-199-00	TANTALUM 10 10% 16V
C78	1-131-199-00	TANTALUM 10 10% 16V
C86	1-109-535-00	MICA 100PF 5% 100V
C87	1-108-567-00	MYLAR 0.0033 5% 50V
D1	8-719-162-07	RD6.2E-B
D2	8-719-175-07	RD7.5E-B
D3	8-719-175-07	RD7.5E-B
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-759-930-54	CA3054 ; RCA
IC2	8-759-907-93	μA796HC-B
IC3	8-759-906-01	TL601CP, P-MOS ; TI
IC4	8-749-936-51	BX365A (A7015)
IC5	8-759-906-07	TL607CP, P-MOS ; TI
IC6	8-759-145-57	μPC4557C ; NEC
IC7	8-759-907-93	μA796HC-B
IC8	8-759-906-01	TL601CP, P-MOS ; TI
IC9	8-749-936-51	BX365A (A7015)
IC10	8-759-906-07	TL607CP, P-MOS ; TI
IC11	8-759-145-57	μPC4557C ; NEC
IC12	8-759-906-07	TL607CP, P-MOS ; TI
IC13	8-759-145-57	μPC4557C ; NEC
IC14	8-759-902-21	SN74LS221N, TTL ; TI
IC15	8-759-902-21	SN74LS221N, TTL ; TI
IC16	8-759-300-25	HD1025, ECL (MIC1025L ; MOTOROLA)
IC17	8-759-632-00	M53200P, TTL (SN7400N ; TI)
IC18	8-759-145-57	μPC4557C ; NEC
IC19	8-759-905-27	NE527K ; SIGNETICS
IC20	8-759-902-21	SN74LS221N, TTL ; TI
IC21	8-759-110-08	μPC1008C (NC4044 ; MOTOROLA)
IC22	8-759-016-48	MC1648P, ECL ; MOTOROLA
IC23	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC24	8-759-301-31	HD10131, ECL (MC10131L ;MOTOROLA)
IC25	8-759-301-31	HD10131, ECL (MC10131L ;MOTOROLA)
IC26	8-759-300-25	HD1025, ECL (MIC1025L ; MOTOROLA)
IC27	8-759-902-21	SN74LS221N, TTL ; TI
IC28	8-759-001-13	MC10113L, ECL ; MOTOROLA
IC29	8-759-900-04	SN74LS04N, TTL ; TI
IC30	8-759-001-02	MC10102L, ECL ; MOTOROLA
IC31	8-759-301-31	HD10131, ECL (MC10131L ;MOTOROLA)
IC32	8-759-900-74	SN74LS74N, TTL ; TI
L1	1-407-178-XX	MICRO 1μH
L2	1-407-161-XX	MICRO 22μH
LPF1	1-231-482-00	LOW-PASS
LPF2	1-231-480-00	LOW-PASS
LPF3	1-231-482-00	LOW-PASS
LPF4	1-231-480-00	LOW-PASS
Q1	8-724-375-01	2SC403C
Q2	8-724-375-01	2SC403C
Q3	8-724-375-01	2SC403C
Q4	8-724-375-01	2SC403C
Q5	8-729-612-77	2SA1027R

Ref. No.	Part No.	Description
(DC-5 BOARD, CONTINUED)		
Q6	8-729-612-77	2SA1027R
Q7	8-729-612-77	2SA1027R
Q8	8-729-612-77	2SA1027R
Q9	8-729-368-90	2SC689H
R26	1-246-545-00	CARBON 1M 1/4W 5%
R45	1-246-545-00	CARBON 1M 1/4W 5%
R116	1-247-053-00	CARBON 1M 1/8W 5%
TP1 to TP9	2-252-662-00	TERMINAL, TP
TPE1 to TPE4	2-252-662-00	TERMINAL, TP
VC1	8-719-713-93	1S2139C, VARICAP
VL1	1-407-563-00	VAR 1μH
VR1	1-224-937-00	VAR, METAL 1K
VR2	1-224-937-00	VAR, METAL 1K
VR4	1-224-931-00	VAR, METAL 20K (UP TO #10200)
	1-226-015-00	VAR, METAL 20K (#10201 & UP)
VR5	1-224-940-00	VAR, METAL 10K
VR6	1-224-940-00	VAR, METAL 10K
VR7	1-224-940-00	VAR, METAL 10K
VR8	1-224-940-00	VAR, METAL 10K

DM-15 BOARD (ONLY SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
----	A-6257-043-A	DM-15 BOARD, COMPLETE (ONLY SECAM)
C11	1-123-333-00	ELECT 100 25V
C12	1-107-068-00	MICA 20PF 5% 50V
C15	1-107-068-00	MICA 20PF 5% 50V
C18	1-108-595-00	MYLAR 0.047 5% 50V
C19	1-131-199-00	TANTALUM 10 10% 16V
C20	1-131-199-00	TANTALUM 10 10% 16V
C21	1-109-589-00	MICA 0.0022 5% 500V
C22	1-108-563-00	MYLAR 0.0022 5% 50V
C25	1-109-549-00	MICA 390PF 5% 100V
C26	1-109-561-00	MICA 0.001 5% 100V
C27	1-109-549-00	MICA 390PF 5% 100V
C28	1-109-549-00	MICA 390PF 5% 100V
C29	1-109-561-00	MICA 0.001 5% 100V
C30	1-109-549-00	MICA 390PF 5% 100V
C32	1-123-333-00	100 25V
C34	1-123-333-00	100 25V
C36	1-123-333-00	100 25V
C39	1-123-333-00	ELECT 100 25V
C53	1-109-525-00	MICA 39PF 5% 100V
C54	1-109-539-00	MICA 150PF 5% 100V

Ref. No.	Part No.	Description
(DM-15 BOARD, CONTINUED)		
C55	1-109-525-00	MICA 39PF 5% 100V
C56	1-109-539-00	MICA 150PF 5% 100V
C57	1-131-199-00	TANTALUM 10 10% 16V
C64	1-109-561-00	MICA 0.001 5% 100V
C66	1-107-077-00	MICA 47PF 5% 50V
C67	1-107-077-00	MICA 47PF 5% 50V
C68	1-108-571-00	MYLAR 0.0047 5% 50V
CV1	1-141-022-21	TRIMMER, 20pF
CV2	1-141-022-21	TRIMMER, 20pF
D1	8-719-151-07	RD5.1E-B
D2	8-719-815-55	1S1555
D3	8-719-815-55	1S1555
D4	8-719-815-55	1S1555
D5	8-719-815-55	1S1555
D6	8-719-151-07	RD5.1E-B
DL1	1-415-181-00	DELAY LINE 170n SEC
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC2	8-759-301-02	HD10102, ECL (MC10102L ; MOTOROLA)
IC3	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC4	8-759-301-07	HD10107, ECL (MC10107L ; MOTOROLA)
IC5	8-749-936-51	BX365A (A7015)
IC6	8-759-907-93	μA796HC-B
IC7	8-759-990-82	TL082CP ; TI
IC8	8-759-990-82	TL082CP ; TI
IC9	8-759-906-07	TL607CP, P-MOS ; TI
IC11	8-759-145-57	μPC4557C ; NEC
IC12	8-759-907-07	TL607CP, P-MOS ; TI
IC13	8-759-145-57	μPC4557C ; NEC
IC14	8-759-906-07	TL607CP, P-MOS ; TI
IC15	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC16	8-759-001-24	MC10124L, ECL ; MOTOROLA
IC17	8-759-900-04	SN24LS04N, TTL ; TI
IC18	8-759-900-00	SN74LS00N, TTL ; TI
IC19	8-759-906-01	TL601CP, P-MOS ; TI
IC20	8-759-900-00	SN74LS00N, TTL ; TI
IC21	8-759-902-21	SN74LS221N, TTL ; TI
IC22	8-759-900-74	SN74LS74N, TTL ; TI
IC23	8-759-903-93	SN74LS393N, TTL ; TI
IC24	8-759-001-16	MC10116L
IC25	8-759-902-21	SN74LS221N, TTL ; TI
IC26	8-759-902-21	SN74LS221N, TTL ; TI
IC27	8-759-902-21	SN74LS221N, TTL ; TI
IC28	8-759-900-74	SN74LS74N, TTL ; TI
IC29	8-759-900-86	SN74LS86N, TTL ; TI
IC30	8-759-901-57	SN74LS157N, TTL ; TI
L1	1-407-171-XX	MICRO 150μH
L2	1-407-171-XX	MICRO 150μH
LPF1	1-231-477-11	LOW-PASS
Q1	8-724-375-01	2SC403C
Q2	8-724-375-01	2SC403C
Q3	8-724-375-01	2SC403C
R46	1-246-545-00	CARBON 1M 1/4W 5%

Ref. No.	Part No.	Description
(DM-15 BOARD, CONTINUED)		
RN1	**1-231-504-00**	**620 x 4, 1/8W**
RN2	**1-231-504-00**	**620 x 4, 1/8W**
RN3	**1-231-504-00**	**620 x 4, 1/8W**
RN4	**1-231-504-00**	**620 x 4, 1/8W**
SW1	**1-553-441-00**	**SWITCH, TOGGLE**
TP1 to TP10	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP
VR1	**1-224-937-00**	**VAR, METAL 1K**
VR2	**1-224-940-00**	**VAR, METAL 10K**
VR3	**1-224-940-00**	**VAR, METAL 10K**
VR4	**1-224-940-00**	**VAR, METAL 10K**
VR5	**1-224-940-00**	**VAR, METAL 10K**
X1	**1-527-515-00**	**CRYSTAL 8.812500MHz**
X2	**1-527-514-00**	**CRYSTAL 8.500000MHz**

DO-10 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	**TANTALUM 22 10% 16V**
	1-161-670-00	**CERAMIC 0.002 50V**
----	A-6257-040-A	DO-10 BOARD, COMPLETE
C3	**1-109-539-00**	**MICA 150PF 5% 100V**
C4	**1-109-539-00**	**MICA 150PF 5% 100V**
C8	**1-107-078-00**	**MICA 51PF 5% 50V**
C16	**1-131-215-00**	**TANTALUM 1 10% 35V**
C17	**1-131-238-00**	**TANTALUM 10 10% 25V**
C18	**1-131-238-00**	**TANTALUM 10 10% 25V**
C20	**1-123-333-00**	**ELECT 100 25V**
C22	**1-123-333-00**	**ELECT 100 25V**
C26	**1-109-538-00**	**MICA 130PF 5% 100V**
D1	**8-719-815-80**	**1S1587**
D2	**8-719-815-80**	**1S1587**
D3	**8-719-815-80**	**1S1587**
D4	**8-719-815-80**	**1S1587**
D5	**8-719-709-25**	**1S1925P**
D6	**8-719-815-55**	**1S1555**
D7	**8-719-815-55**	**1S1555**
IC1	**8-720-002-96**	**IC TX429D, MOS**
IC2	**8-759-374-58**	**HA17458GS (LM1458N ; NSC)**
IC3	**8-759-100-71**	**μPC71A (μA710HC ; FSC)**
IC4	**8-759-901-23**	**SN74LS123N, TTL ; TI**
IC5	**8-759-632-00**	**M53200P, TTL (SN7400N ; TI)**

Ref. No.	Part No.	Description
(DO-10 BOARD, CONTINUED)		
L1	**1-407-161-XX**	**MICRO 22μH**
L2	**1-407-157-XX**	**MICRO 10μH**
L3	**1-407-157-XX**	**MICRO 10μH**
L4	**1-407-178-XX**	**MICRO 1μH**
L5	**1-407-157-XX**	**MICRO 10μH**
L6	**1-407-157-XX**	**MICRO 10μH**
Q1	**8-724-375-01**	**2SC403C**
Q2	**8-724-375-01**	**2SC403C**
Q3	**8-724-375-01**	**2SC403C**
Q4	**8-724-375-01**	**2SC403C**
Q5	**8-724-375-01**	**2SC403C**
Q6	**8-724-375-01**	**2SC403C**
Q7	**8-724-375-01**	**2SC403C**
Q8	**8-729-612-77**	**2SA1027R**
Q9	**8-729-663-47**	**2SC1364**
R10	**1-246-545-00**	**CARBON 1M 1/4W 5%**
R11	**1-246-545-00**	**CARBON 1M 1/4W 5%**
R26	**1-246-545-00**	**CARBON 1M 1/4W 5%**
R29	**1-246-529-00**	**CARBON 220K 1/4W 5%**
TP1 to TP5	2-252-662-00	TERMINAL, TP
TPE1	2-252-662-00	TERMINAL, TP
VR1	**1-224-940-00**	**VAR, METAL 10K**
VR2	**1-224-937-00**	**VAR, METAL 1K**
VR3	**1-224-939-00**	**VAR, METAL 5K**
VR4	**1-224-939-00**	**VAR, METAL 5K**

EN-7 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	**TANTALUM 22 10% 16V**
	1-161-670-00	**CERAMIC 0.022 50V**
---	A-6257-038-A	EN-7 BOARD, COMPLETE (ONLY PAL)
BPF1	**1-231-465-00**	**FILTER, BANDPASS 4.43MHz**
C1	**1-108-595-00**	**MYLAR 0.047 5% 50V**
C2	**1-131-199-00**	**TANTALUM 0 10% 16V**
C3	**1-131-199-00**	**TANTALUM 0 10% 16V**
C5	**1-107-073-00**	**MICA 33PF 5% 50V**
C6	**1-109-548-00**	**MICA 360PF 5% 100V**
C7	**1-107-068-00**	**MICA 20PF 5% 50V**
C8	**1-108-595-00**	**MYLAR 0.047 5% 50V**
C9	**1-131-199-00**	**TANTALUM 10 10% 16V**
C10	**1-131-199-00**	**TANTALUM 10 10% 16V**
C11	**1-107-073-00**	**MICA 33PF 5% 50V**

Ref. No.	Part No.	Description
(EN-7 BOARD, CONTINUED)		
C12	1-109-548-00	MICA 360PF 5% 100V
C13	1-107-068-00	MICA 20PF 5% 50V
C26	1-107-073-00	MICA 33PF 5% 50V
C29	1-109-549-00	MICA 390PF 5% 100V
C30	1-109-549-00	MICA 390PF 5% 100V
C31	1-109-549-00	MICA 390PF 5% 100V
C32	1-109-549-00	MICA 390PF 5% 100V
C33	1-131-215-00	TANTALUM 1 10% 35V
C34	1-109-549-00	MICA 390PF 5% 100V
C35	1-109-549-00	MICA 390PF 5% 100V
C36	1-109-549-00	MICA 390PF 5% 100V
C37	1-109-549-00	MICA 390PF 5% 100V
C39	1-107-102-00	MICA 5PF ±0.5PF 50V
C40	1-107-065-00	MICA 15PF 5% 50V
C45	1-107-068-00	MICA 20PF 5% 50V
C46	1-107-068-00	MICA 20PF 5% 50V
C47	1-107-068-00	MICA 20PF 5% 50V
C48	1-107-068-00	MICA 20PF 5% 50V
C49	1-131-199-00	TANTALUM 10 10% 16V
C50	1-131-215-00	TANTALUM 1 10% 35V
C53	1-131-199-00	TANTALUM 10 10% 16V
C55	1-123-333-00	ELECT 100 25V
C57	1-123-333-00	ELECT 100 25V
C59	1-123-333-00	ELECT 100 25V
C61	1-123-333-00	ELECT 100 25V
C80	1-107-071-00	MICA 27PF 5% 50V
CV1	1-141-022-21	TRIMMER, 20pF
D1	8-719-162-07	RD6.2E-B
D2	8-719-162-07	RD6.2E-B
D3	8-719-151-07	RD5.1E-B
DL1	1-415-173-00	DELAY LINE 50nS, DIP
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-749-936-51	BX365A (A7015)
IC2	8-759-906-07	TL607CP, P-MOS ; TI
IC3	8-759-145-57	μPC4557C ; NEC
IC4	8-759-930-54	CA3054 ; RCA
IC5	8-759-907-93	μA796HC-B
IC6	8-749-936-51	BX365A (A7015)
IC7	8-759-906-07	TL607CP, P-MOS ; TI
IC8	8-759-145-57	μPC4557C ; NEC
IC9	8-759-930-54	CA3054 ; RCA
IC10	8-759-907-93	μA796HC-B
IC11	8-759-907-93	μA796HC-B
IC12	8-749-936-51	BX365A (A7015)
IC13	8-759-145-57	μPC4557C ; NEC
IC14	8-759-931-02	CA3102E ; RCA
IC15	8-759-902-21	SN74LS221N, TTL ; TI
IC16	8-759-902-21	SN74LS221N, TTL ; TI
IC17	8-759-902-21	SN74LS221N, TTL ; TI
IC18	8-759-902-21	SN74LS221N, TLL ; TI
IC19	8-759-900-00	SN74LS00N, TTL ; TI
IC20	8-759-632-06	M53276P, TTL (SN7406N ; TI)

Ref. No.	Part No.	Description
(EN-7 BOARD, CONTINUED)		
IC21	8-759-951-10	SN74110AN ; TI
IC22	8-759-900-04	SN74LS04N, TTL ; TI
IC23	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC24	8-759-301-05	HD10105, ECL ; (MC10105L ; MOTOROLA)
IC25	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC26	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC27	8-759-001-13	MC10113L, ECL ; MOTOROLA
IC28	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC29	8-759-900-74	SN74LS74N, TTL ; TI
IC30	8-759-900-74	SN74LS74N, TTL ; TI
IC31	8-759-941-23	SN74123N, TTL ; TI
IC32	8-759-941-23	SN74123N, TTL ; TI
IC33	8-759-974-26	SN7426N, TTL ; TI
IC34	8-739-145-57	μPC4557C ; NEC
L1	1-407-166-XX	MICRO 56μH
L2	1-407-160-XX	MICRO 56μH
L3	1-407-165-XX	MICRO 47μH
Q1	8-724-375-01	2SC403C
Q2	8-724-375-01	2SC403C
Q3	8-724-375-01	2SC403C
Q4	8-729-368-90	2SC689H
R8	1-246-545-00	CARBON 1M 1/4W 5%
R35	1-246-545-00	CARBON 1M 1/4W 5%
RN1	1-231-504-11	BLOCK, 620 x 4, 1/8W
TP1 to TP4	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP
VR1	1-224-940-00	VAR, METAL 10K
VR2	1-224-940-00	VAR, METAL 10K
VR3	1-224-940-00	VAR, METAL 10K
VR4	1-224-935-00	VAR, METAL 200
VR5	1-224-940-00	VAR, METAL 10K
VR7	1-224-941-00	VAR, METAL 20K
VR8	1-224-941-00	VAR, METAL 20K
VR9	1-224-926-00	VAR, METAL 500
VR10	1-224-940-00	VAR, METAL 10K
VR11	1-224-939-00	VAR, METAL 5K
VR12	1-224-999-00	VAR, METAL 5K
X1	1-527-518-00	CRYSTAL 17.734475MHz

IO-3 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

1-131-441-00	TANTALUM 22 10% 16V
1-161-670-00	CERAMIC 0.022 50V

Ref. No.	Part No.	Description
(IO-3 BOARD, CONTINUED)		
---	A-6257-037-A	IO-3 (P) BOARD, COMPLETE (PAL)
---	A-6257-041-A	IO-3 (S) BOARD, COMPLETE (SECAM)
C1	1-123-308-00	ELECT 220 10V
C2	1-123-308-00	ELECT220 10V
C3	1-131-191-00	TANTALUM 47 10% 6.3V
C4	1-131-191-00	TANTALUM 47 10% 6.3V
C5	1-108-595-00	MYLAR 0.047 5% 50V
C6	1-131-199-00	TANTALUM 10 10% 16V
C7	1-131-199-00	TANTALUM 10 10% 16V
C8	1-108-571-00	MYLAR 0.0047 5% 50V
C10	1-109-549-00	MICA 390PF 5% 100V
C13	1-131-199-00	TANTALUM 10 10% 16V
C14	1-131-199-00	TANTALUM 10 10% 16V
C15	1-108-595-00	MYLAR 0.047 5% 50V
C16	1-108-595-00	MYLAR 0.047 5% 50V
C17	1-108-595-00	MYLAR 0.047 5% 50V
C25	1-131-215-00	TANTALUM 10% 35V
C28	1-108-595-00	MYLAR 0.047 5% 50V
C29	1-107-068-00	MYCA 20PF 5% 50V
C30	1-109-539-00	MICA 150PF 5% 100V
C40	1-107-068-00	MICA 20PF 5% 50V
C43	1-107-068-00	MICA 20PF 5% 50V
C46	1-123-333-00	ELECT 100 25V
C48	1-123-333-00	ELECT 100 25V
C50	1-123-333-00	ELECT 100 25V
C54	1-107-077-00	MICA 47PF 5% 50V
C55	1-107-077-00	MICA 47PF 5% 50V
C56	1-109-549-00	MICA, 390PF 5% 100V (ONLY SECAM)
C63 to C72	1-131-199-00	TANTALUM 10 10% 16V
C101	1-107-068-00	CAP, MICA 20PF 5% 50V
C108	1-102-978-00	CAP, CERAMIC 220PF 5% 50V
CV1	1-141-022-21	TRIMMER 20PF
CV2	1-141-022-21	TRIMMER 20PF
D1	8-719-709-25	1S1925P (ONLY SECAM)
DL1	1-415-178-00	DELAY LINE 250n SEC
FB1	1-535-178-00	FERRITE BEADS
FB2	1-535-178-00	FERRITE BEADS
FB3	1-585-178-00	FERRITE BEADS
IC1	8-759-632-06	M53206P, TTL (SN7406N ; TI)
IC2	8-749-936-51	BX365A (A7015)
IC3	8-749-936-51	BX365A (A7015)
IC4	8-749-936-51	BX365A (A7015)
IC5	8-759-906-07	TL607CP, P-MOS ; TI
IC6	8-759-990-82	TL082CP ; TI
IC7	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC9	8-759-902-21	SN74LS221N, TTL ; TI
IC10	8-720-002-96	TX429D, MOS
IC11	8-759-906-07	TL607CP, P-MOS ; TI
IC12	8-759-990-82	TL082CP ; TI
IC13	8-759-301-02	HD10102, ECL (MC10102L ; MOTOROLA)
IC14	8-759-145-57	μPC4557C ; NEC
IC15	8-749-936-51	BX365A (A7015)
IC16	8-749-936-51	BX365A (A7015)

Ref. No.	Part No.	Description
(IO-3 BOARD, CONTINUED)		
IC17	8-749-936-61	BX366A (A7021)
IC18	8-749-936-61	BX366A (A7021)
IC19	8-749-936-61	BX366A (A7021)
IC20	8-749-936-51	BX365A (A7015)
IC21	8-749-936-51	BX365A (A7015)
IC22	8-759-907-93	μA796HC-B
IC23	8-749-936-51	BX365A (A7015)
IC24	8-759-145-57	μPC4557C ; NEC
IC25	8-759-632-06	M53206P, TTL (SN7406N ; TI)
IC26	8-759-632-06	M53206P, TTL (SN7406N ; TI)
L1	1-407-157-XX	MICRO 10μH
L2	1-407-157-XX	MICRO 10μH
L3	1-407-157-XX	MICRO 10μH
L4	1-407-157-XX	MICRO 10μH
L5	1-407-157-XX	MICRO 10μH
L6	1-407-157-XX	MICRO 10μH
LPF1	1-231-473-00	LOW-PASS
LPF2	1-231-474-00	LOW-PASS
Q1	8-729-612-77	2SA1027R
Q2	8-724-375-01	2SC403C
Q3	8-724-375-01	2SC403C
Q4	8-724-375-01	2SC403C
Q5	8-729-612-77	2SA1027R
Q6	8-724-375-01	2SC403C
Q7	8-729-612-77	2SA1027R
Q8	8-724-375-01	2SC403C
R8	1-246-533-00	CARBON 330K 1/4W 5%
R19	1-246-545-00	CARBON 1M 1/4W 5%
R30	1-246-529-00	CARBON 220K 1/4W 5%
R31	1-246-545-00	CARBON 1M 1/4W 5%
R32	1-246-545-00	CARBON 1M 1/4W 5%
R38	1-246-533-00	CARBON 330K 1/4W 5%
RL1	1-515-342-21	RELAY, REED 12V 26mA
RL2	1-515-342-21	RELAY, REED 12V 26mA
RL3	1-515-342-21	RELAY, REED 12V 26mA
RL4	1-515-342-21	RELAY, REED 12V 26mA
RL5	1-515-342-21	RELAY, REED 12V 26mA
SW1	1-553-441-00	SWITCH, TOGGLE
TP1 to TP7	2-252-662-00	TERMINAL, TP
TPE2 to TPE5	2-252-662-00	TERMINAL, TP
VL1	1-407-574-00	VAR 68μH
VR1	1-224-941-00	VAR, METAL 20K
VR2	1-224-937-00	VAR, METAL 1K
VR3	1-224-937-00	VAR, METAL 1K
VR4	1-224-937-00	VAR, METAL 1K
VR5	1-224-935-00	VAR, METAL 200
VR6	1-224-937-00	VAR, METAL 1K
VR7	1-224-936-00	VAR, METAL 500
VR8	1-224-951-00	VAR, METAL 20K
VR9	1-224-925-00	VAR, METAL 200 (ONLY PAL)

Ref. No.	Part No.	Description
(IO-3 BOARD, CONTINUED)		
X1	1-527-513-00	CRYSTAL 5.357422MHz (PAL)
X1	1-527-512-00	CRYSTAL 5.244141MHz (SECAM)
X2	1-527-511-00	CRYSTAL 5.119166MHz

MB-6 BOARD (ONLY SECAM)

----	A-6265-029-A	MB-6 BOARD, COMPLETE (ONLY SECAM)
CN1 to CN9	1-508-892-00	CONNECTOR, PCB, 100P
CN11 to CN15	1-508-892-00	CONNECTOR, PCB, 100P
CN17 to CN20	1-508-906-00	RECEPTACLE, 10P, MALE

MB-7 BOARD (ONLY PAL)

----	A-6265-026-B	MB-7 BOARD, COMPLETE (ONLY PAL)
CN1 to CN9	1-508-892-00	CONNECTOR, PCB, 100P
CN12 to CN16	1-508-892-00	CONNECTOR, PCB, 100P
CN17 to CN20	1-508-906-00	RECEPTACLE, 10P MALE

MD-8 BOARD (ONLY SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
----	A-6257-047-A	MD-8 BOARD, COMPLETE (ONLY SECAM)
BPF1	1-231-469-00	BANDPASS 4.3MHz
C3	1-109-669-00	MICA 68PF 2% 500V
C4	1-109-669-00	MICA 68PF 2% 500V
C6	1-107-069-00	MICA 22PF 5% 50V
C8	1-109-539-00	MICA 150PF 5% 100V
C11	1-131-215-00	TANTALUM 1 10% 35V
C14	1-109-669-00	MICA 68PF 2% 500V
C15	1-109-669-00	MICA 68PF 2% 500V
C16	1-108-563-00	MYLAR 0.0022 5% 50V
C17	1-108-579-00	MYLAR 0.01 5% 50V
C18	1-108-579-00	MYLAR 0.01 5% 50V

Ref. No.	Part No.	Description
(MD-8 BOARD, CONTINUED)		
C20	1-107-068-00	MICA 20PF 5% 50V
C23	1-107-068-00	MICA 20PF 5% 50V
C24	1-109-525-00	MICA 39PF 5% 100V
C25	1-109-539-00	MICA 150PF 5% 100V
C26	1-109-525-00	MICA 39PF 5% 100V
C27	1-109-539-00	MICA 150PF 5% 100V
C28	1-107-073-00	MICA 33PF 5% 50V
C29	1-109-534-00	MICA 91PF 5% 100V
C30	1-109-561-00	MICA 0.001 5% 100V
C31	1-109-561-00	MICA 0.001 5% 100V
C32	1-109-563-00	MICA 0.0012 5% 100V
C33	1-109-563-00	MICA 0.0012 5% 100V
C34	1-109-563-00	MICA 0.0012 5% 100V
C38	1-123-333-00	ELECT 100 25V
C40	1-123-333-00	ELECT 100 25V
C42	1-123-333-00	ELECT 100 25V
C44	1-123-333-00	ELECT 100 25V
C57	1-123-333-00	ELECT 100 25V
C58	1-107-069-00	MICA 22PF 5% 50V
C67	1-107-077-00	MICA 47PF 5% 50V
C68	1-107-077-00	MICA 47PF 5% 50V
C69	1-109-549-00	MICA 390PF 5% 100V
C70	1-131-199-00	TANTALUM 10 10% 16V
C71	1-131-199-00	TANTALUM 10 10% 16V
D1	8-719-709-25	1S1925P
D2	8-719-709-25	1S1925P
D3	8-719-709-25	1S1925P
D4	8-719-709-25	1S1925P
D5	8-719-162-07	RD6.2E-B
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-759-145-57	μPC4557C ; NEC
IC2	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC4	8-759-001-24	MC10124L, ECL ; MOTOROLA
IC5	8-759-301-02	HD10102, ECL (MC10102L ; MOTOROLA)
IC6	8-759-301-02	HD10102, ECL (MC10102L ; MOTOROLA)
IC7	8-759-001-24	MC10124L, ECL ; MOTOROLA
IC8	8-759-301-02	HD10102, ECL (MC10102L ; MOTOROLA)
IC9	8-759-301-07	HD10107, ECL (MC10107L ; MOTOROLA)
IC10	8-759-145-57	μPC4557C ; NEC
IC11	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC12	8-759-902-21	SN74LS221N, TTL ; TI
IC13	8-759-900-00	SN74LS00N, TTL ; TI
IC14	8-759-900-04	SN74LS04N, TTL ; TI
IC15	8-759-906-07	TL607CP, P-MOS ; TI
IC16	8-759-906-07	TL607CP, P-MOS ; TI

Ref. No.	Part No.	Description
(MD-8 BOARD, CONTINUED)		
IC17	8-759-145-57	μPC4557C ; NEC
IC18	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC19	8-759-301-31	MD10131, ECL (MC10131L; MOTOROLA)
IC20	8-759-907-93	μA796HC-B
IC21	8-759-990-82	TL082CP ; TI
IC22	8-759-990-82	TL082CP ; TI
IC23	8-759-930-54	CA3054 ; RCA
IC24	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC25	8-759-900-74	SN74LS74N, TTL ; TI
IC26	8-759-902-21	SN74LS221N, TTL ; TI
IC27	8-759-900-00	SN74LS00N, TTL ; TI
IC28	8-759-900-08	SN74LS08N, TTL ; TI
IC29	8-759-145-57	μPC4557C ; NEC
IC30	8-759-632-06	M53206P, TTL (SN7406N ; TI)
IC31	8-759-145-57	μPC4557C ; NEC
IC32	8-759-145-57	μPC4557C ; NEC
L1	1-407-171-XX	MICRO 150μH
L2	1-407-171-XX	MICRO 150μH
L3	1-407-159-XX	MICRO 15μH
Q1	8-729-629-12	2SC2291
Q2	8-724-375-01	2SC403C
Q3	8-729-658-32	2SC1583
Q4	8-724-375-01	2SC403C
Q5	8-724-375-01	2SC403C
Q6	8-729-629-12	2SC2291
Q7	8-724-375-01	2SC403C
Q8	8-724-375-01	2SC403C
Q9	8-729-612-77	2SA1027R
Q10	8-729-612-77	2SA1027R
RN1	1-231-340-00	620 x 4, 1/8W
RN2	1-231-340-00	620 x 4, 1/8W
RN3	1-231-340-00	620 x 4, 1/8W
RN4	1-231-340-00	620 x 4, 1/8W
TP1 to TP14	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP
VC1	1-141-022-21	TRIMMER, 20PF
VC2	1-141-022-21	TRIMMER, 20PF
VL1	1-407-570-00	VAR 15μH
VR1	1-224-938-00	VAR, METAL 2K
VR2	1-224-940-00	VAR, METAL 10K
VR3	1-224-938-00	VAR, METAL 2K
VR4	1-224-940-00	VAR, METAL 10K
VR6	1-224-940-00	VAR, METAL 10K
VR7	1-224-940-00	VAR, METAL 10K
VR8	1-224-940-00	VAR, METAL 10K
VR9	1-224-939-00	VAR, METAL 5K
VR10	1-224-939-00	VAR, METAL 5K
VR11	1-224-939-00	VAR, METAL 5K

Ref. No.	Part No.	Description
(MD-8 BOARD, CONTINUED)		
VR12	1-224-939-00	VAR, METAL 5K
X1	1-527-514-00	CRYSTAL 8.500000MHz
X2	1-527-515-00	CRYSTAL 8.812500MHz

MY-4 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-161-670-00	CERAMIC 0.022 50V
----	A-6259-077-A	MY-4 BOARD, COMPLETE
C3	1-131-441-00	TANTALUM 22 10% 16V
C6	1-131-441-00	TANTALUM 22 10% 16V
CN1	1-560-210-00	RECEPTACLE, MALE, 30P
FB1 to FB4	1-535-178-00	FERRITE DEADS
IC1	8-759-974-08	SN7408N, TTL; TI
IC2	8-759-974-08	SN7408N, TTL; TI
IC3	8-759-632-04	M53204P, TTL (SN7404N ; TI)
IC4	8-759-632-04	M53204P, TTL (SN7404N ; TI)
IC5	8-759-632-04	M53204P, TTL (SN7404N ; TI)
ICA1	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICA2	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICA3	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICA4	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICB1	8-759-903-74	SN74LS374N, TTL ; TI
ICB2	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICB3	8-759-903-74	SN74LS374N, TTL ; TI
ICB4	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICC1	8-759-902-73	SN74LS273N, TTL ; TI
ICC2	8-759-902-73	SN74LS273N, TTL ; TI
ICC3	8-759-902-73	SN74LS273N, TTL ; TI
ICC4	8-759-902-73	SN74LS273N, TTL; TI
ICD1	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICD2	8-759-903-74	SN74LS374N, TTL ; TI
ICD3	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICD4	8-759-903-74	SN74LS374N, TTL ; TI
ICE1	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)

Ref. No.	Part No.	Description
(MY-4 BOARD, CONTINUED)		
ICE2	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICE3	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICE4	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICF1	8-759-902-73	SN74LS273N, TTL ; TI
ICF2	8-759-902-73	SN74LS273N, TTL ; TI
ICF3	8-759-902-73	SN74LS273N, TTL ; TI
ICF4	8-759-902-73	SN74LS273N, TTL ; TI
ICG1	8-759-941-66	SN74166N, TTL ; TI
ICG2	8-759-941-66	SN74166N, TTL ; TI
ICG3	8-759-941-66	SN74166N, TTL ; TI
ICG4	8-759-941-66	SN74166N, TTL ; TI
ICH1	8-759-941-66	SN74166N, TTL ; TI
ICH2	8-759-941-66	SN74166N, TTL ; TI
ICH3	8-759-941-66	SN74166N, TTL ; TI
ICH4	8-759-941-66	SN74166N, TTL ; TI
ICI1	8-759-902-73	SN74LS273N, TTL ; TI
ICI2	8-759-902-73	SN74LS273N, TTL ; TI
ICI3	8-759-902-73	SN74LS273N, TTL; TI
ICI4	8-759-902-73	SN74LS273N, TTL ; TI
ICJ1	8-759-672-22	M5L2111AP-2,N-MOS(2111A-2; INTEL)
ICJ2	8-759-672-22	M5L2111AP-2,N-MOS(2111A-2; INTEL)
ICJ3	8-759-672-22	M5L2111AP-2,N-MOS(2111A-2; INTEL)
ICJ4	8-759-672-22	M5L2111AP-2,N-MOS(2111A-2; INTEL)
ICK1	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICK2	8-759-903-74	SN74LS374N, TTL ; TI
ICK3	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICK4	8-759-903-74	SN74LS374N, TTL ; TI
ICL1	8-759-902-73	SN74LS273N, TTL; TI
ICL2	8-759-902-73	SN74LS273N, TTL ; TI
ICL3	8-759-902-73	SN74LS273N, TTL ; TI
ICL4	8-759-902-73	SN74LS273N, TTL ; TI
ICM1	8-759-903-74	SN74LS374N, TTL ; TI
ICM2	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICM3	8-759-903-74	SN74LS374N, TTL ; TI
ICM4	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICN1	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICN2	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICN3	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICN4	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
SW1	1-553-441-00	SWITCH, TOGGLE
TP1 to TP4	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP

Ref. No.	Part No.	Description

MY-5 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-161-670-00	CERAMIC 0.022 50V
---	A-6259-078-A	MY-5 BOARD, COMPLETE
C3	1-131-441-00	TANTALUM 22 10% 16V
C24	1-131-441-00	TANTALUM 22 10% 16V
CN1	1-560-210-00	RECEPTACLE, MALE, 30P
FB1 to FB4	1-535-178-00	FERRITE BEADS
ICA1	8-759-900-04	SN74LS04N, TTL ; TI
ICA2	8-759-900-04	SN74LS04N, TTL ; TI
ICA3	8-759-901-57	SN74LS157N, TTL ; TI
ICA4	8-759-901-57	SN74LS157N, TTL ; TI
ICA5	8-759-901-64	SN74LS164N, TTL ; TI
ICB1	8-759-900-00	SN74LS00N, TTL ; TI
ICB2	8-759-900-11	SN74LS11N, TTL ; TI
ICB3	8-759-941-63	SN74163N, TTL ; TI
ICB4	8-759-941-63	SN74163N, TTL ; TI
ICB5	8-759-900-04	SN74LS04N, TTL ; TI
ICC1	8-759-900-04	SN74LS04N, TTL ; TI
ICC2	8-759-900-02	SN74LS02N, TTL ; TI
ICC3	8-759-941-63	SN74163N, TTL ; TI
ICC4	8-759-941-63	SN74163N, TTL ; TI
ICC5	8-759-900-00	SN74LS00N, TTL ; TI
ICD1	8-759-901-64	SN74LS164N, TTL TI
ICD2	8-759-942-55	SN74265N, TTL ; TI
ICD3	8-759-941-63	SN74163N, TTL ; TI
ICD4	8-759-941-63	SN74163N, TTL ; TI
ICD5	8-759-900-11	SN74LS11N, TTL ; TI
ICE1	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICE2	8-759-900-74	SN74LS74N, TTL ; TI
ICE3	8-759-901-57	SN74LS157N, TTL ; TI
ICE4	8-759-900-74	SN74LS74N, TTL ; TI
ICE5	8-759-900-08	SN74LS08N, TTL ; TI
ICF1	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICF2	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICF3	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICF4	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICF5	8-759-901-58	SN74LS158N, TTL; TI
ICG2	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICG3	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICG4	8-759-672-22	M5L2111AP-2, N-MOS (2111A-2; INTEL)
ICH1	8-759-903-74	SN74LS374N, TTL ; TI
ICH2	8-759-903-74	SN74LS374N, TTL ; TI
ICH3	8-759-903-74	SN74LS374N, TTL ; TI
ICH4	8-759-903-74	SN74LS374N, TTL ; TI
ICH5	8-759-903-79	SN74LS379N, TTL ; TI

Ref. No.	Part No.	Description
(MY-5 BOARD, CONTINUED)		
IC11	8-759-900-04	SN74LS04N, TTL ; TI
IC12	8-759-902-83	SN74LS283N, TTL ; TI
IC13	8-759-902-83	SN74LS283N, TTL ; TI
IC15	8-759-901-75	SN74LS175N, TTL ; TI
ICJ1	8-759-902-83	SN74LS283N, TTL ; TI
ICJ2	8-759-901-57	SN74LS157N, TTL ; TI
ICJ3	8-759-901-57	SN74LS157N, TTL ; TI
ICJ4	8-759-902-83	SN74LS283N, TTL ; TI
ICJ5	8-759-901-57	SN74LS157N, TTL ; TI
ICK1	8-759-901-57	SN74LS157N, TTL ; TI
ICK2	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICK3	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICK4	8-759-901-57	SN74LS157N, TTL ; TI
ICK5	8-759-901-53	SN74LS153N, TTL ; TI
ICL1	8-759-928-55	AM2855PC, MOS ; ADVANCED MICRO DEVICE
ICL2	8-759-902-73	SN74LS273N, TTL ; TI
ICL3	8-759-902-73	SN74LS273N, TTL ; TI
ICL4	8-759-928-55	AM2855PC, MOS; ADVANCED MICRO DEVICE
ICM1	8-759-902-73	SN74LS273N, TTL ; TI
ICM2	8-759-902-73	SN74LS273N, TTL ; TI
ICM3	8-759-902-73	SN74LS273N, TTL ; TI
ICM4	8-759-902-73	SN74LS273N, TTL ; TI
ICM5	8-759-901-64	SN74LS164N, TTL ; TI
ICN1	8-759-903-74	SN74LS374N, TTL ; TI
ICN2	8-759-903-74	SN74LS374N, TTL ; TI
ICN3	8-759-903-74	SN74LS374N, TTL ; TI
ICN4	8-759-902-73	SN74LS374N, TTL ; TI
ICN5	8-759-900-04	SN74LS04N, TTL ; TI
SW1	1-552-875-00	DIGITAL
TP1 to TP8	2-252-662-00	TERMINAL, TP
TPE1 to TPE5	2-252-662-00	TERMINAL, TP

PW-43 BOARD (PAL & SECAM)

---	A-6263-020-A	PW-43 BOARD, COMPLETE
BD1	8-719-510-10	DIODE, S1RB10
C1	1-123-356-00	ELECT 10 50V
C2	1-123-356-00	ELECT 10 50V
C3	1-131-441-00	TANTALUM 22 10% 16V
C4	1-131-238-00	TANTALUM 10 10% 25V
C5	1-108-579-00	MYLAR 0.01 5% 50V
C6	1-108-555-00	MYLAR 0.001 5% 50V
C7	1-131-238-00	TANTALUM 10 10% 25V
C8	1-161-670-00	CERAMIC 0.022 50V
C9	1-161-670-00	CERAMIC 0.022 50V
C10	1-108-555-00	MYLAR 0.001 5% 50V

Ref. No.	Part No.	Description
(PW-43 BOARD, CONTINUED)		
C11	1-102-114-00	CERAMIC 470PF(B) 10% 50V
C12	1-131-441-00	TANTALUM 22 10% 16V
C13	1-123-337-00	ELECT 1000 25V
C14	1-123-337-00	ELECT 1000 25V
C15	1-131-238-00	TANTALUM 10 10% 25V
C16	1-102-114-00	CERAMIC 470PF(B) 10% 50V
C17	1-108-555-00	MYLAR 0.001 5% 50V
C18	1-131-239-00	TANTALUM 6.8 10% 35V
C19	1-131-238-00	TANTALUM 10 10% 25V
C20	1-108-579-00	MYLAR 0.01 5% 50V
C21	1-108-555-00	MYLAR 0.001 5% 50V
C22	1-161-670-00	CERAMIC 0.022 50V
C23	1-161-670-00	CERAMIC 0.022 50V
D1	8-719-815-55	1S1555
D2	8-719-168-07	RD6.8E-B
D4	8-719-815-55	1S1555
D5	8-719-815-55	1S1555
D6	8-719-151-07	RD5.1E-B
D7	8-719-110-07	RD10E-B
IC1	8-759-377-23	HA17723G (μA723DC ; FSC)
IC2	8-759-377-43	HA17741GS (μA741TC ; FSC)
IC3	8-759-377-23	HA17723G (μA723DC ; FSC)
IC4	8-759-377-43	HA17741GS (μA741TC ; FSC)
Q1	8-729-347-82	2SD478
Q2	8-729-356-82	2SB568
Q5	8-729-612-77	2SA1027R
Q6	8-729-612-77	2SA1027R
Q7	8-729-347-82	2SD478
Q8	8-729-356-82	2SB568
Q9	8-729-612-77	2SA1027R
R1	1-246-493-00	CARBON 6.8K 1/4W 5%
R6	1-246-497-00	CARBON 10K 1/4W 5%
R7	1-246-521-00	CARBON 100K 1/4W 5%
R8	1-246-489-00	CARBON 4.7K 1/4W 5%
R9	1-246-461-00	CARBON 330 1/4W 5%
R10	1-246-465-00	CARBON 470 1/4W 5%
R11	1-246-461-00	CARBON 330 1/4W 5%
R12	1-246-473-00	CARBON 1K 1/4W 5%
R13	1-246-449-00	CARBON 100 1/4W 5%
R14	1-246-490-00	CARBON 5.1K 1/4W 5%
R15	1-246-481-00	CARBON 2.2K 1/4W 5%
R16	1-246-485-00	CARBON 3.3K 1/4W 5%
R17	1-246-446-00	CARBON 75 1/4W 5%
R18	1-246-449-00	CARBON 100 1/4W 5%
R19	1-246-473-00	CARBON 1K 1/4W 5%
R20	1-246-473-00	CARBON 1K 1/4W 5%
R21	1-246-487-00	CARBON 3.9K 1/4W 5%
R22	1-246-461-00	CARBON 330 1/4W 5%
R23	1-246-461-00	CARBON 330 1/4W 5%
R24	1-246-496-00	CARBON 9.1K 1/4W 5%
R25	1-246-465-00	CARBON 470 1/4W 5%
R26	1-246-477-00	CARBON 1.5K 1/4W 5%
R27	1-246-461-00	CARBON 330 1/4W 5%

Ref. No.	Part No.	Description
(PW-43 BOARD, CONTINUED)		
R28	1-246-446-00	CARBON 75 1/4W 5%
R29	1-244-869-00	CARBON 680 1/2W 5%
R30	1-246-497-00	CARBON 10K 1/4W 5%
R31	1-246-461-00	CARBON 330 1/4W 5%
R32	1-246-485-00	CARBON 3.3K 1/4W 5%
R33	1-246-497-00	CARBON 10K 1/4W 5%
R34	1-246-481-00	CARBON 2.2K 1/4W 5%
R35	1-246-449-00	CARBON 100 1/4W 5%
R36	1-246-482-00	CARBON 2.4K 1/4W 5%
R37	1-246-495-00	CARBON 8.2K 1/4W 5%
R38	1-246-482-00	CARBON 2.4K 1/4W 5%
R39	1-246-449-00	CARBON 100 1/4W 5%
R40	1-246-461-00	CARBON 330 1/4W 5%
VR1	1-224-928-00	VAR, METAL 2K
VR2	1-224-927-00	VAR, METAL 1K
VR3	1-224-927-00	VAR, METAL 1K
VR4	1-224-928-00	VAR, METAL 2K

RI-3 BOARD (PAL & SECAM)

----	A-6265-031-A	RI-3 BOARD, COMPLETE
CN1	1-560-191-00	RECEPTACLE, 40P, MALE
FB1	1-535-178-00	FERRITE BEADS

SG-20 BOARD (ONLY SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
----	A-6259-074-A	SG-20 BOARD, COMPLETE (ONLY SECAM)
BPF1	1-231-466-00	BANDPASS 4.43MHz
C1	1-123-308-00	ELECT 220 10V
C2	1-123-308-00	ELECT 220 10V
C3	1-123-332-00	ELECT 47 25V
C4	1-109-561-00	MICA 0.001 5% 100V
C5	1-131-199-00	TANTALUM 10 10% 16V
C6	1-109-560-00	MICA 910PF 5% 100V
C7	1-109-561-00	MICA 0.001 5% 100V
C10	1-109-561-00	MICA 0.001 5% 100V
C11	1-131-215-00	TANTALUM 1 10% 35V
C12	1-131-215-00	TANTALUM 1 10% 35V
C15	1-109-556-00	MICA 620PF 5% 100V
C16	1-109-542-00	MICA 220PF 5% 100V
C17	1-109-542-00	MICA 220PF 5% 100V
C18	1-109-561-00	MICA 0.001 5% 100V

Ref. No.	Part No.	Description
(SG-20 BOARD, CONTINUED)		
C22	1-109-561-00	MICA 0.001 5% 100V
C23	1-109-535-00	MICA 100PF 5% 100V
C25	1-108-595-00	MYLAR 0.047 5% 50V
C26	1-109-561-00	MICA 0.001 5% 100V
C27	1-109-556-00	MICA 620PF 5% 100V
C28	1-109-542-00	MICA 220PF 5% 100V
C29	1-109-542-00	MICA 220PF 5% 100V
C30	1-109-561-00	MICA 0.001 5% 100V
C35	1-109-535-00	MICA 100PF 5% 100V
C37	1-108-595-00	MYLAR 0.047 5% 50V
C40	1-109-557-00	MICA 680PF 5% 100V
C41	1-109-528-00	MICA 51PF 5% 100V
C45	1-109-553-00	MICA 470PF 5% 100V
C46	1-109-528-00	MICA 51PF 5% 100V
C51	1-109-542-00	MICA 220PF 5% 100V
C55	1-109-535-00	MICA 100PF 5% 100V
C56	1-109-561-00	MICA 0.001 5% 100V
C57	1-109-561-00	MICA 0.001 5% 100V
C97	1-109-542-00	MICA 220PF 5% 100V
C98	1-109-535-00	MICA 100PF 5% 100V
C99	1-108-563-00	MYLAR 0.0022 5% 50V
CF1	1-527-497-00	FILTER, CERAMIC 4.55MHz
D1	8-719-768-72	1S2687-S2, VARI CAP
D2	8-719-151-07	RD5.1E-B
D3	8-719-768-72	1S2687-S2, VARICAP
D4	8-719-151-07	RD5.1E-B
D5	8-719-815-55	1S1555
D6	8-719-815-55	1S1555
FB1 to FB8	1-535-178-00	FERRITE BEADS
ICA2	8-759-901-64	SN74LS164N, TTL ; TI
ICA3	8-759-901-63	SN74LS163AN, TTL ; TI
ICA4	8-759-900-04	SN74LS04N, TTL ; TI
ICB1	8-759-900-30	SN74LS30N, TTL ; TI
ICB2	8-759-902-21	SN74LS221N, TTL ; TI
ICB3	8-759-901-63	SN74LS163AN, TTL ; TI
ICB4	8-759-900-04	SN74LS04N, TTL ; TI
ICB5	8-759-900-74	SN74LS74N, TTL ; TI
ICC1	8-759-900-74	SN74LS74N, TTL ; TI
ICC2	8-759-900-00	SN74LS00N, TTL ; TI
ICC3	8-759-901-63	SN74LS163AN, TTL ; TI
ICC4	8-759-974-26	SN7426N, TTL ; TI
ICC5	8-759-902-21	SN74LS221N, TTL ; TI
ICD1	8-759-900-04	SN74LS04N, TTL ; TI
ICD2	8-759-900-00	SN74LS00N, TTL ; TI
ICD3	8-759-941-07	SN74107N, TTL ; TI
ICD4	8-759-900-08	SN74LS08N, TTL ; TI
ICD5	8-759-900-74	SN74LS74N, TTL ; TI
ICE1	8-759-901-64	SN74LS164N, TTL ; TI
ICE2	8-759-900-74	SN74LS74N, TTL ; TI
ICE3	8-759-900-04	SN74LS04N, TTL ; TI

Ref. No.	Part No.	Description
(SG-20 BOARD, CONTINUED)		
ICE4	8-759-901-75	SN74LS175N, TTL ; TI
ICE5	8-759-942-21	SN74221N, TTL ; TI
ICF1	8-759-901-64	SN74LS164N, TTL ; TI
ICF2	8-759-901-63	SN74LS163AN, TTL ; TI
ICF3	8-759-942-65	SN74265N, TTL ; TI
ICF4	8-759-902-21	SN74LS221N, TTL ; TI
ICF5	8-759-942-21	SN74221N, TTL ; TI
ICH1	8-759-900-08	SN74LS08N, TTL ; TI
ICH2	8-759-900-86	SN74LS86N, TTL ; TI
ICH3	8-759-941-07	SN74107N, TTL ; TI
ICH4	8-759-900-04	SN74107NLS04N, TTL ; TI
ICH5	8-759-974-08	S7408N, TTL ; TI
ICJ1	8-759-900-21	SN74LS21N, TTL ; TI
ICJ2	8-759-901-07	SN74LS107N, TTL ; TI
ICK1	8-759-901-75	SN74LS175N, TTL ; TI
ICK2	8-759-900-00	SN74LS00N, TTL ; TI
ICK3	8-759-355-02	HD35502, P-MOS ; HITACHI
ICK5	8-759-355-02	HD35502, P-MOS ; HITACHI
ICL1	8-759-900-74	SN74LS74N, TTL ; TI
ICL2	8-759-901-64	SN74LS164N, TTL ; TI
ICL3	8-749-938-10	BX381(MFD01A)
ICM1	8-759-902-21	SN74LS221N, TTL ; TI
ICM2	8-759-900-04	SN74LS04N, TTL ; TI
ICN1	8-759-901-23	SN74LS123N, TTL ; TI
ICN2	8-759-901-61	SN74LS161N, TTL ; TI
ICP1	8-759-900-08	SN74LS08N, TTL ; TI
ICP2	8-759-900-04	SN74LS04N, TTL ; TI
ICR1	8-759-952-07	SN75207BN ; TI
ICR2	8-759-903-93	SN74LS393N, TTL ; TI
ICR3	8-749-938-10	BX381 (MFD01A)
ICR5	8-759-618-41	M51841P (NE555N ; SIGNETICS)
ICS5	8-751-040-00	CX-104A ; SONY
ICT5	8-749-936-51	BX365A (A7015)
Q1	8-724-375-01	2SC403C
Q2	8-729-658-32	2SC1583
Q3	8-724-375-01	2SC403C
Q4	8-729-658-32	2SC1583
Q5	8-729-612-77	2SA1027R
Q6	8-724-375-01	2SC403C
Q7	8-729-612-77	2SA1027R
Q8	8-724-375-01	2SC403C
Q9	8-765-300-00	2SC2009
Q10	8-724-375-01	2SC403C
Q11	8-729-658-32	2SC1583
Q12	8-724-375-01	2SC403C
R5	1-246-523-00	CARBON 120K 1/4W 5%
RN1	1-231-450-00	3.3K x 8, 1/8W
SWA1	1-516-925-21	DIP, 8-1
TP1 to TP12	2-252-662-00	TERMINAL, TP

Ref. No.	Part No.	Description
(SG-20 BOARD, CONTINUED)		
TPE1 to TPE3	2-252-662-00	TERMINAL, TP
VL1	1-407-571-00	VAR 22μH
VL2	1-407-570-00	VAR 15μH
VL3	1-407-569-00	VAR 10μH
VR1	1-224-940-00	VAR, METAL 10K
X1	1-527-519-00	CRYSTAL 5.062500MHz
X2	1-527-520-00	CRYSTAL 8.000000MHz

SG-21 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6259-073-A	SG-21 BOARD, COMPLETE (ONLY PAL)
BPF1	1-231-466-00	BANDPASS, 4.43MHz
C1	1-123-308-00	ELECT 220 10V
C2	1-123-308-00	ELECT 220 10V
C3	1-123-332-00	ELECT 47 25V
C4	1-108-555-00	MYLAR 0.001 5% 50V
C5	1-131-199-00	TANTALUM 10 10% 16V
C6	1-109-560-00	MICA 910PF 5% 100V
C7	1-109-561-00	MICA 0.001 5% 100V
C10	1-109-561-00	MICA 0.001 5% 100V
C11	1-131-215-00	TANTALUM11 10% 35V
C12	1-131-215-00	TANTALUM 11 10% 35V
C15	1-109-556-00	MICA 620PF 5% 100V
C16	1-109-542-00	MICA 220PF 5% 100V
C17	1-109-542-00	MICA 220PF 5% 100V
C18	1-109-561-00	MICA 0.001 5% 100V
C22	1-109-561-00	MICA 0.001 5% 100V
C23	1-109-535-00	MICA 100PF 5% 100V
C25	1-108-595-00	MYLAR 0.047 5% 50V
C26	1-109-561-00	MICA 0.001 5% 100V
C27	1-109-556-00	MICA 620PF 5% 100V
C28	1-109-542-00	MICA 220PF 5% 100V
C29	1-109-542-00	MICA 220PF 5% 100V
C30	1-109-561-00	MICA 0.001 5% 100V
C35	1-109-535-00	MICA 100PF 5% 100V
C37	1-108-595-00	MYLAR 0.047 5% 50V
C40	1-109-559-00	MICA 820PF 5% 100V
C41	1-109-528-00	MICA 51PF 5% 100V
C45	1-109-553-00	MICA 470PF 5% 100V
C46	1-109-528-00	MICA 51PF 5% 100V
C51	1-109-542-00	MICA 220PF 5% 100V

Ref. No.	Part No.	Description
(SG-21 BOARD, CONTINUED)		
C58	1-109-535-00	MICA 100PF 5% 100V
C59	1-131-211-00	TANTALUM 0.22 10% 35V
C60	1-131-211-00	TANTALUM 0.22 10% 35V
C63	1-109-556-00	MICA 620PF 5% 100V
C64	1-109-539-00	MICA 150PF 5% 100V
C65	1-109-539-00	MICA 150PF 5% 100V
C67	1-109-561-00	MICA 0.001 5% 100V
C69	1-109-561-00	MICA 0.001 5% 100V
C72	1-109-542-00	MICA 220PF 5% 100V
C107	1-109-535-00	MICA 100PF
D1	8-719-768-72	1S2687-S2, VARICAP
D2	8-719-151-07	RD5.1E-B
D3	8-719-768-72	1S2687-S2, VARICAP
D4	8-719-151-07	RD5.1E-B
D5	8-719-815-55	1S1555
D6	8-719-815-55	1S1555
D7	8-719-768-72	1S2687-S1, VARICAP
D8	8-719-151-07	RD5.1E-B
DLM1	1-415-167-00	DELAY LINE 50nSEC, DIP
FB1 to FB8	1-535-178-00	FERRITE BEADS
ICA3	8-759-901-63	SN74LS163AN, TTL ; TI
ICA4	8-759-900-04	SN74LS04N, TTL ; TI
ICB1	8-759-900-30	SN74LS30N, TTL ; TI
ICB2	8-759-900-30	SN74LS30N, TTL ; TI
ICB3	8-759-901-63	SN74LS163AN, TTL ; TI
ICB4	8-759-900-04	SN74LS04N, TTL ; TI
ICB5	8-759-900-74	SN74LS74N, TTL ; TI
ICC1	8-759-901-64	SN74LS164N, TTL ; TI
ICC2	8-759-901-64	SN74LS164N, TTL ; TI
ICC3	8-759-901-63	SN74LS163AN, TTL ; TI
ICC4	8-759-974-26	SN7426N, TTL ; TI
ICC5	8-759-902-21	SN74LS221N, TTL ; TI
ICD1	8-759-900-04	SN74LS04N, TTL ; TI
ICD2	8-759-900-00	SN74LS00N, TTL ; TI
ICD3	8-759-941-07	SN74107N, TTL ; TI
ICD4	8-759-900-08	SN74LS08N, TTL ; TI
ICD5	8-759-900-74	SN74LS74N, TTL ; TI
ICE1	8-759-900-21	SN74LS21N, TTL ; TI
ICE2	8-759-901-75	SN74LS175N, TTL ; TI
ICE3	8-759-900-04	SN74LS04N, TTL ; TI
ICE4	8-759-901-75	SN74LS175N, TTL ; TI
ICE5	8-759-942-21	SN74221N, TTL ; TI
ICF1	8-759-901-64	SN74LS164N, TTL ; TI
ICF2	8-759-900-74	SN74LS74N, TTL ; TI
ICF3	8-759-942-65	SN74265N, TTL ; TI
ICF4	8-759-902-21	SN74LS221N, TTL ; TI
ICF5	8-759-942-21	SN74221N, TTL ; TI
ICH1	8-759-902-21	SN74LS221N, TTL ; TI
ICH2	8-759-901-64	SN74LS164N, TTL ; TI
ICH3	8-759-941-07	SN74107N, TTL ; TI

Ref. No.	Part No.	Description
(SG-21 BOARD, CONTINUED)		
ICH4	8-759-900-04	SN74LS04N, TTL ; TI
ICH5	8-759-974-08	SN7408N, TTL , TI
ICJ1	8-759-900-08	SN74LS08N, TTL , TI
ICJ2	8-759-901-53	SN74LS153N, TTL ; TI
ICJ3	8-759-355-02	HD35502, P-MOS ; HITACHI
ICJ5	8-759-355-02	HD35502, P-MOS ; HITACHI
ICK1	8-759-900-74	SN74LS74N, TTL ; TI
ICK2	8-759-911-63	SN74S163N, TTL ; TI
ICK3	8-749-938-10	BX381 ; SONY
ICL1	8-759-901-64	SN74LS164N, TTL ; TI
ICL2	8-759-911-63	SN74S163N, TTL ; TI
ICL3	8-749-938-10	BX381 (MFD01A)
ICL5	8-759-618-41	M51841P (NE555N ; SIGNETICS)
ICM2	8-759-632-00	M53200P, TTL (SN7400N ; TI)
ICM5	8-759-040-00	CX-104A ; SONY
ICN1	8-759-974-08	SN7408N, TTL ; TI
ICN2	8-759-901-57	SN74LS157N, TTL ; TI
ICN5	8-749-936-51	BX365A (A7015)
ICP1	8-759-942-65	SN74265N, TTL ; TI
ICP2	8-759-952-07	SN75207BN ; TI
ICR1	8-749-938-10	BX381 ; SONY
Q1	8-724-375-01	2SC403C
Q2	8-729-658-32	2SC1583
Q3	8-724-375-01	2SC403C
Q4	8-729-658-32	2SC1583
Q5	8-729-612-77	2SA1027R
Q6	8-724-375-01	2SC403C
Q7	8-729-612-77	2SA1027R
Q8	8-724-375-01	2SC403C
Q9	8-765-300-00	2SC2009
Q10	8-724-375-01	2SC403C
Q11	8-724-375-01	2SC403C
Q12	8-724-375-01	2SC403C
Q13	8-729-658-32	2SC1583
R6	1-246-523-00	CARBON 120K 1/4W 5%
R101	1-247-124-00	CARBON 510 1/8W 5%
RN1	1-231-450-00	3.3K x 8, 1/8W
RN2	1-231-450-00	3.3K x 8, 1/8W
SWA1	1-516-925-21	DIP, 8-1
SWA2	1-516-925-21	DIP, 8-1
TP1 to TP6	2-252-662-00	TERMINAL, TP
TPE1	2-252-662-00	TERMINAL, TP
TPE2	2-252-662-00	TERMINAL, TP
VL1	1-407-571-00	VAR 22μH
VL2	1-407-569-00	VAR 10μH
VL3	1-407-569-00	VAR 10μH
VL4	1-407-565-00	VAR 2.2μH
X1	1-527-519-00	CRYSTAL 5.062500MHz
X2	1-527-520-00	CRYSTAL 8.000000MHz
X3	1-527-521-00	CRYSTAL 17.734475MHz

SS-12 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
----	A-6259-075-A	SS-12 BOARD, COMPLETE
C1	1-109-535-00	MICA 100PF 5% 100V
C2	1-109-553-00	MICA 470PF 5% 100V
C6	1-108-587-00	MYLAR 0.022 5% 50V
C9	1-108-563-00	MYLAR 0.0022 5% 50V
C10	1-131-219-00	TANTALUM 4.7 10% 35V
C15	1-131-211-00	TANTALUM 0.22 10% 35V
C20	1-109-549-00	MICA 390PF 5% 100V
C21	1-108-591-00	MYLAR 0.033 5% 50V
C22	1-108-591-00	MYLAR 0.033 5% 50V
C23	1-109-543-00	MICA 240PF 5% 100V
C24	1-109-543-00	MICA 240PF 5% 100V
C25	1-108-579-00	MYLAR 0.01 5% 50V
C26	1-109-554-00	MICA 510PF 5% 100V
C30	1-109-545-00	MICA 270PF 5% 100V
C31	1-108-571-00	MYLAR 0.0047 5% 50V
C32	1-108-579-00	MYLAR 0.01 5% 50V
C34	1-109-561-00	MICA 0.001 5% 100V
C35	1-108-591-00	MYLAR 0.033 5% 50V
C52	1-109-554-00	MICA 510PF 5% 100V
D1	8-719-815-55	1S1555
D2	8-719-162-07	RD6.2E
D3	8-719-133-07	RD3.3E-B
D4	8-719-815-55	1S1555
D5	8-719-815-55	1S1555
D6	8-719-162-07	RD6.2E
FB1 to FB4	1-535-178-00	FERRITE BEADS
IC1	8-759-981-00	TL081CP, TI
IC2	8-759-374-58	HA17458GS (LM1458N ; NSC)
IC3	8-759-952-07	SN75207BN, TI
IC4	8-759-952-07	SN75207BN, TI
IC5	8-759-901-23	SN74LS123N, TTL ; TI
IC6	8-759-900-74	SN74LS74N, TTL ; TI
IC7	8-759-901-23	SN74LS123N, TTL ; TI
IC8	8-759-902-21	SN74LS221N, TTL ; TI
IC9	8-759-901-23	SN74LS123N, TTL ; TI
IC10	8-759-100-71	μPC71A (μA710HC; FSC)

(SS-12 BOARD, CONTINUED)

IC11	8-759-901-23	SN74LS123N, TTL ; TI
IC12	8-759-902-21	SN74LS221N, TTL ; TI
IC13	8-759-925-10	TL510CP ; TI
IC14	8-759-901-12	SN74LS112N, TTL ; TI
IC15	8-759-902-21	SN741S221N, TTL ; TI
IC16	8-759-900-00	SN74LS00N, TTL ; TI
IC17	8-759-632-16	M53206P, TTL (3N7406N ; TI)
IC18	8-759-900-04	SN74LS04N, TTL ; TI
IC19	8-759-900-04	SN74LS04N, TTL ; TI
IC20	8-759-974-08	SN7408N, TTL ; TI
L1	1-407-166-XX	MICRO 56μH
Q1	8-724-375-01	2SC403C
Q2	8-724-375-01	2SC403C
Q3	8-724-375-01	2SC403C
Q4	8-729-384-48	2SA844
Q5	8-723-304-00	2SK43-4
Q6	8-723-304-00	2SK43-4
Q7	8-723-304-00	2SK43-4
Q8	8-729-384-48	2SA844
Q9	8-723-304-00	2SK43-4
Q10	8-723-304-00	2SK43-4
Q11	8-723-304-00	2SK43-4
Q12	8-724-375-01	2SC403C
R16	1-246-545-00	CARBON 1M 1/4W 5%
R31	1-246-533-00	CARBON 330K 1/4W 5%
R61	1-246-525-00	CARBON 150K 1/4W 5%
TP1 to TP7	2-252-662-00	TERMINAL, TP
TPE1 to TPE4	2-252-662-00	TERMINAL, TP
VR1	1-224-940-00	VAR, METAL 10K
VR2	1-224-938-00	VAR, METAL 2K

ST-10 BOARD (PAL & SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

----	A-6265-028-B	ST-10(P) BOARD, COMPLETE (PAL)
----	A-6265-030-B	ST10(S) BOARD, COMPLETE (SECAM)
----	2-252-621-00	HOLDER, LAMP (FOR PL10 to PL13)
----	3-641-300-00	HOLDER, LAMP (FOR PL1 to PL9)

Ref. No.	Part No.	Description
(ST-10 BOARD, CONTINUED)		
C1	1-123-332-00	ELECT 47 25V
C2	1-161-670-00	CERAMIC 0.022 50V
C3	1-123-332-00	ELECT 47 25V
C4	1-161-670-00	CERAMIC 0.022 50V
C5	1-161-670-00	CERAMIC 0.022 50V
C6	1-131-441-00	TANTALUM 22 10% 16V
C7	1-123-298-00	ELECT 470 6.3V
C8	1-161-670-00	CERAMIC 0.022 50V
C9	1-131-441-00	TANTALUM 22 10% 16V
C10	1-161-670-00	CERAMIC 0.022 50V
C11	1-131-215-00	TANTALUM 1 10% 35V
C12	1-161-670-00	CERAMIC 0.022 50V
C13	1-161-670-00	CERAMIC 0.022 50V
C14	1-109-542-00	MICA 220PF 5% 100V (PAL)
C15	1-109-535-00	MICA 100PF 5% 100V (PAL)
CN1	1-560-191-00	RE LE, 40P, MALE
CN51 WITH CN61	1-551-805-00	FLAT CABLE E, WITH PLUGS, 40P
IC1	8-759-632-04	M53204P, TTL (SN74040 ; TI)
IC2	8-759-354-51	HD75451AP (SN75451BP ; TI)
IC3	8-759-354-51	HD75451AP (SN75451BP ; TI)
IC4	8-759-354-51	HD75451AP (SN75451BP ; TI)
IC5	8-759-901-64	SN74LS164N, TTL ; TI
IC6	8-759-145-57	μPC4557C ; NEC
IC7	8-759-632-24	M53204P, TTL (SN7404N ; TI)
IC8	8-759-145-57	μPC4557C ; NEC
IC9	8-759-974-08	SN7408N, TTL ; TI
IC10	8-759-145-57	μPC4557C ; NEC
IC11	8-759-632-00	M53200P, TTL (SN7400N ; TI)
IC12	8-759-145-57	μPC4557C ; NEC
IC13	8-759-902-21	SN74LS221N, TTL ; TI
IC14	8-759-145-57	μPC4557C ; NEC (ONLY PAL)
IC15	8-759-900-74	SN74LS74N, TTL ; TI
IC16	8-759-354-51	HD75451AP (SN75451BP ; TI)
IC17	8-759-632-00	M53200P, TTL (SN7400N ; TI)
IC18	8-759-354-51	HD75451AP (SN75451BP ; TI)
IC19	8-759-354-51	HD75451AP (SN75451BP ; TI)
L1	1-407-157-XX	MICRO 10μH
L2	1-407-157-XX	MICRO 10μH
PL1	1-518-224-00	LAMP 14V 80mA
PL2 to PL12	1-518-259-00	LAMP 5V 60mA
PL13	1-518-259-00	LAMP 5V 60mA (ONLY PAL)
SW1	1-516-777-XX	SLIDE
SW2	1-516-777-XX	SLIDE 2- 2
SW3	1-516-777-XX	SLIDE 2- 2
SW4	1-516-777-XX	SLIDE 2- 2
SW5	1-516-777-XX	SLIDE 2- 2
SW6	1-516-777-XX	SLIDE 2- 2
SW7	1-516-777-XX	SLIDE 2- 2
SW8	1-516-777-XX	SLIDE 2- 2 (ONLY PAL)
SW9	1-516-777-XX	SLIDE 2- 2
SW10	1-516-777-XX	SLIDE 2- 2

Ref. No.	Part No.	Description
(ST-10 BOARD, CONTINUED)		
VR1	1-224-981-21	VAR, METAL 5K
VR2	1-224-981-21	VAR, METAL 5K
VR3	1-224-981-21	VAR, METAL 5K
VR4	1-224-981-21	VAR, METAL 5K
VR5	1-224-981-21	VAR, METAL 5K
VR6	1-224-981-21	VAR, METAL (ONLY PAL)
VR7	1-224-981-21	VAR, METAL 5K
VR8	1-224-981-21	VAR, METAL 5K
VR9	1-224-981-21	VAR, METAL (ONLY PAL)
VR10	1-226-023-00	VAR, METAL 5K

UI-3 BOARD (ONLY PAL)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6257-045-A	UI-3 BOARD (ONLY PAL)
BPF1	1-231-470-00	BANDPASS 20.9MHz
BPF2	1-231-464-00	BANDPASS 4.43MHz
BPF3	1-231-464-00	BANDPASS 4.43MHz
C1	1-109-554-00	MICA 510PF 5% 100V
C2	1-123-379-00	ELECT 1 100V
C3	1-123-379-00	ELECT 1 100V
C4	1-109-554-00	MICA 510PF 5% 100V
C11	1-108-575-00	MYLAR 0.0068 5% 50V
C12	1-108-555-00	MYLAR 0.001 10% 50V
C13	1-131-199-00	TANTALUM 10 10% 16V
C20	1-131-199-00	TANTALUM 10 10% 16V
C21	1-131-199-00	TANTALUM 10 10% 16V
C27	1-107-084-00	MICA 91PF 5% 50V
C28	1-109-540-00	MICA 180PF 5% 100V
C29	1-107-084-00	MICA 91PF 5% 50V
C32	1-123-379-00	ELECT 1 100V
C33	1-123-379-00	ELECT 1 100V
C36	1-107-073-00	MICA 33PF 5% 50V
C38	1-131-195-00	TANTALUM 33 10% 10V
C39	1-131-199-00	TANTALUM 10 10% 16V
C42 to C51	1-131-199-00	TANTALUM 10 10% 16V
C55	1-131-199-00	TANTALUM 10 10% 16V
C56	1-131-199-00	TANTALUM 10 10% 16V
C58	1-107-073-00	MICA 33PF 5% 50V
C60	1-107-073-00	MICA 33PF 5% 50V
C62	1-109-560-00	MICA 910PF 5% 100V

Ref. No.	Part No.	Description
(UI-3 BOARD, CONTINUED)		
C63	1-131-199-00	TANTALUM 10 10% 16V
C64	1-131-199-00	TANTALUM 10 10% 16V
C67	1-131-199-00	TANTALUM 10 10% 16V
C72	1-123-333-00	ELECT 100 25V
C74	1-123-333-00	ELECT 100 25V
C79	1-109-529-00	MICA 56PF 5% 100V
D1	8-719-815-55	1S1555
D2	8-719-815-55	1S1555
D3	8-719-162-07	RD6.2E-B
D4	8-719-162-07	RD6.2E-B
D5	8-719-162-07	RD6.2E-B
DL1	1-415-179-00	DELAY LINE 270nSEC
DL2	1-415-180-00	DELAY LINE 365nSEC
DL3	1-415-075-00	DELAY LINE 63.943μSEC, 4.43MHz
FB1 to FB4	1-535-178-00	
IC1	8-759-632-04	M53204P, TTL (SN7404N ; TI)
IC2	8-759-941-63	SN74163N, TTL ; TI
IC3	8-759-910-00	SN74S00N, TTL ; TI
IC4	8-759-941-63	SN74163N, TTL ; TI
IC5	8-759-911-75	SN74S175N, TTL ; TI
IC6	8-759-941-63	SN74163N, TTL ; TI
IC7	8-759-632-74	M53274P, TTL (SN7474N ; TI)
IC8	8-759-941-63	SN74163N, TTL ; TI
IC9	8-759-910-00	SN74S00N, TTL ; TI
IC10	8-759-911-63	SN74S163N, TTL ; TI
IC11	8-759-016-48	MC1648P, ECL ; MOTOROLA
IC12	8-749-938-10	BX381 ; SONY
IC13	8-759-632-00	M53200P, TTL (SN7400N ; TI)
IC14	8-759-941-21	SN74121N, TTL ; TI
IC15	8-759-902-21	SN74LS221N, TTL ; TI
IC16	8-759-907-93	μA796HC-B
IC17	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC18	8-759-301-31	HD10131, ECL (MC10131L; MOTOROLA)
IC19	8-759-907-93	μA796HC-B
IC20	8-759-907-93	μA796HC-B
IC21	8-749-936-51	BX365A (A7015)
IC22	8-759-906-07	TL607CP, P-MOS ; TI
IC23	8-749-936-51	BX365A (A7015)
IC24	8-759-906-01	TL601CP, P-MOS ; TI
IC25	8-759-632-06	M53206P, TTL (SN7406N ; TI)
IC26	8-759-930-54	CA3054 ; RCA
IC27	8-759-145-57	μPC4557C ; NEC
IC28	8-759-930-54	CA3054 ; RCA
IC29	8-759-930-54	CA3054 ; RCA
IC30	8-759-902-21	SN74LS221N, TTL ; TI
L1	1-407-178-XX	MICRO 1μH
L2	1-407-161-XX	MICRO 22μH
L3	1-407-161-XX	MICRO 22μH
L4	1-407-178-XX	MICRO 1μH
L5	1-407-159-XX	MICRO 15μH
L6	1-407-161-XX	MICRO 22μH

Ref. No.	Part No.	Description
(UI-3 BOARD, CONTINUED)		
Q1	8-724-375-01	2SC403C
Q2	8-729-612-77	2SA1027R
Q3	8-729-612-77	2SA1027R
Q4	8-724-375-01	2SC403C
Q5	8-724-375-01	2SC403C
Q6	8-729-612-77	2SA1027R
Q7	8-729-612-77	2SA1027R
Q8	8-729-612-77	2SA1027R
Q9	8-729-612-77	2SA1027R
RL1	1-515-342-21	RELAY REED, 12V 26mA
RN1	1-231-340-00	620 x 4, 1/8W
TP1 to TP7	2-252-662-00	TERMINAL, TP
TPE1 to TPE3	2-252-662-00	TERMINAL, TP
VC1	8-719-713-93	1S2139C, VARICAP
VL1	1-407-566-00	VAR 3.3μH
VL2	1-407-569-00	VAR 10μH
VR1	1-224-941-00	VAR, METAL 20K
VR2	1-224-941-00	VAR, METAL 20K
VR3	1-224-938-00	VAR, METAL 2K
VR4	1-224-938-00	VAR, METAL 2K
VR5	1-224-936-00	VAR, METAL 500
VR6	1-224-940-00	VAR, METAL 10K

UI-4 BOARD (ONLY SECAM)

NOTE 1. Resistors that are not listed in the following list are metal film resistors of 1/4W, 1%. They are shown in "NOTES FOR PARTS LIST".

NOTE 2. Reference No. of following capacitors are omitted.

	1-131-441-00	TANTALUM 22 10% 16V
	1-161-670-00	CERAMIC 0.022 50V
---	A-6257-042-A	UI-4 BOARD, COMPLETE (ONLY SECAM)
BPF1	1-231-467-00	BANDPASS 20.1MHz
BPF2	1-231-468-00	BANDPASS 4.28MHz
BPF3	1-231-472-00	BANDPASS 4.43MHz
C1	1-123-379-00	ELECT 1 100V
C2	1-109-561-00	MICA 0.001 5% 100V
C3	1-108-579-00	MYLAR 0.01 5% 50V
C5	1-109-531-00	MICA 68PF 5% 100V
C6	1-109-531-00	MICA 68PF 5% 100V

Ref. No.	Part No.	Description
(UI-4 BOARD, CONTINUED)		
C9	1-109-554-00	MICA 510PF 5% 100V
C15	1-107-068-00	MICA 20PF 5% 50V
C19	1-131-199-00	TANTALUM 10 10% 16V
C21	1-123-379-00	ELECT 1 100V
C22	1-123-379-00	ELECT 1 100V
C24	1-109-557-00	MICA 680PF 5% 100V
C26	1-131-199-00	TANTALUM 10 10% 16V
C27	1-109-563-00	MICA 0.0012 5% 100V
C28	1-123-379-00	ELECT 1 100V
C31	1-107-068-00	MICA 20PF 5% 50V
C33	1-107-068-00	MICA 20PF 5% 50V
C38	1-123-333-00	ELECT 100 25V
C40	1-123-333-00	ELECT 100 25V
C42	1-123-333-00	ELECT 100 25V
C44	1-123-333-00	ELECT 100 25V
C68	1-109-531-00	MICA 68PF 5% 100V
C69	1-107-077-00	MICA 47PF 5% 50V
C70	1-107-077-00	MICA 47PF 5% 50V
CV1	1-141-022-21	TRIMMER, 20pF
CV2	1-141-022-21	TRIMMER, 20pF
CV3	1-141-022-21	TRIMMER, 20pF
D1	8-719-709-25	1S1925P
D2	8-719-709-25	1S1925P
D3	8-719-815-55	1S1555
D4	8-719-815-55	1S1555
DL1	1-415-182-00	DELAY LINE 300nSEC
FB1 to FB4	1-535-178-00	
IC1	8-759-943-93	SN74393N, TTL ; TI
IC2	8-759-900-04	SN74LS04N, TTL ; TI
IC3	8-759-145-57	μPC4557C; NEC
IC4	8-759-906-07	TL607CP, P-MOS ; TI
IC5	8-759-145-57	μPC4557C ; NEC
IC6	8-759-001-16	MC101161, ECL ; MOTOROLA
IC7	8-759-906-07	TL607CP, P-MOS ; TI
IC8	8-759-941-63	SN74163N, TTL ; TI
IC9	8-759-941-63	SN74163N, TTL ; TI
IC10	8-759-941-63	SN74163N, TTL ; TI
IC11	8-759-941-21	SN74121N, TTL ; TI
IC12	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC13	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC14	8-759-907-93	μA796HC-B
IC15	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC16	8-759-301-31	HD10131, ECL (MC10131L ; MOTOROLA)
IC17	8-759-906-01	TL601CP, P-MOS ; TI
IC18	8-759-145-57	μPC4557C ; NEC
IC19	8-759-907-93	μA796HC-B
IC20	8-759-907-92	μA796HC-B

Ref. No.	Part No.	Description
(UI-4 BOARD, CONTINUED)		
IC21	8-749-936-51	BX365A (A7015)
IC22	8-759-907-93	μA796HC-B
IC23	8-759-906-01	TL601CP, P-MOS ; TI
IC24	8-749-936-51	BX365A (A7015)
IC25	8-759-001-16	MC10116L, ECL ; MOTOROLA
IC26	8-759-301-02	HD10102, ECL (MC10102L ; MOTOROLA)
IC27	8-759-632-06	M53206P, TTL (SN7406N ; TI)
IC28	8-759-900-04	SN74LS04N, TTL ; TI
L1	1-407-178-XX	MICRO 1μH
L2	1-407-157-XX	MICRO 10μH
L3	1-407-157-XX	MICRO 10μH
LPF1	1-231-476-00	LOW-PASS
LPF2	1-231-475-00	LOW-PASS
Q1	8-729-629-12	2SC2291
Q2	8-729-658-32	2SC1583
Q4	8-724-375-01	2SC403C
RL1	1-515-342-21	RELAY, REED, 12V 26mA
TP1 to TP8	2-252-662-00	TERMINAL, TP
TPE1 to TPE3	2-252-662-00	TERMINAL, TP
VL1	1-407-567-00	VAR 4.7μH
VR2	1-224-940-00	VAR, METAL 10K
VR3	1-224-940-00	VAR, METAL 10K
VR4	1-224-940-00	VAR, METAL 10K
VR5	1-224-940-00	VAR, METAL 10K
VR6	1-224-937-00	VAR, METAL 1K
VR7	1-224-934-00	VAR, METAL 100
X1	1-527-517-00	CRYSTAL 17.000000MHz
X2	1-527-512-00	CRYSTAL 5.244141MHz
X3	1-527-511-00	CRYSTAL 5.119166MHz

FRAME

---	1-509-437-00	SOCKET, POWER TRANSISTOR
⚠ ---	1-551-044-00	CORD, POWER, 3P
BD1	8-719-000-16	DIODE, DS16BN-M
BD2	8-719-000-16	DIODE, DS16BN-M
C1	1-123-555-00	ELECT 47000 16V
C2	1-123-555-00	ELECT 47000 16V
C3	1-123-556-00	ELECT 22000 25V
C4	1-123-556-00	ELECT 22000 25V
⚠ C5	1-108-779-00	MYLAR 0.01 20% 125V

Ref. No.	Part No.	Description
(FRAME, CONTINUED)		
⚠CN1F	1-508-683-00	PLUG, HOUSING, 6P
⚠	1-535-072-00	CONTACT, FEMALE
⚠CN1M	1-508-680-00	PLUG, HOUSING, 6P
⚠	1-535-070-00	CONTACT, MALE
⚠CN2F	1-508-683-00	PLUG, HOUSING, 6P
⚠	1-535-072-00	CONTACT, FEMALE
⚠CN2M	1-508-680-00	PLUG, HOUSING, 6P
⚠	1-535-070-00	CONTACT, MALE
⚠CN3	**1-551-256-00**	**CORD WITH PLUG, 2P**
⚠CN4F	1-508-681-00	PLUG, HOUSING, 3P
⚠	1-535-072-00	CONTACT, FEMALE
⚠CN4M	1-508-682-00	PLUG, HOUSING, 3P
⚠	1-535-070-00	CONTACT, MALE
CN5F	1-508-683-00	PLUG, HOUSING, 6P
CN5F	1-535-072-00	CONTACT, FEMALE
CN5M	1-508-680-00	PLUG, HOUSING, 6P
	1-535-070-00	CONTACT, MALE
CN6F	1-508-840-00	PLUG, HOUSING, 9P
	1-535-072-00	CONTACT, FEMALE
CN6M	1-508-839-00	PLUG, HOUSING, 9P
	1-535-070-00	CONTACT, MALE
CN7F	1-508-683-00	PLUG, HOUSING, 6P
	1-535-072-00	CONTACT, FEMALE
CN7M	1-508-680-00	PLUG, HOUSING, 6P
	1-535-070-00	CONTACT, MALE
CN8F	1-508-683-00	PLUG, HOUSING, 6P
	1-535-072-00	CONTACT, FEMALE
CN8M	1-508-680-00	PLUG, HOUSING, 6P
	1-535-070-00	CONTACT, MALE
CN9F	1-508-840-00	PLUG, HOUSING, 9P
	1-535-072-00	CONTACT, FEMALE
CN9M	1-508-839-00	PLUG, HOUSING, 9P
	1-535-070-00	CONTACT, MALE
CN10F	1-508-683-00	PLUG, HOUSING, 6P
	1-535-072-00	CONTACT, FEMALE
CN10M	1-508-680-00	PLUG, HOUSING, 6P
	1-535-070-00	CONTACT, MALE
CN11F	1-508-683-00	PLUG, HOUSING, 6P
	1-535-072-00	CONTACT, FEMALE
CN11M	1-508-680-00	PLUG, HOUSING, 6P
	1-535-070-00	CONTACT, MALE
CN12	**1-508-945-00**	**RECEPTACLE, 7P, MALE**
CN13	**1-561-045-00**	**RECEPTACLE, 7P, FEAMLE**
CN14		
to	**1-509-291-00**	**RECEPTACLE, BNC**
CN21		

Ref. No.	Part No.	Description
(FRAME, CONTINUED)		
CN31	**1-560-209-00**	**CONNECTOR, PCB, 44P**
CN41	**1-560-209-00**	**CONNECTOR, PCB, 44P**
CN71	1-551-806-00	FLAT CABLE F, 30P
WITH CN81		
CN117	1-509-989-00	PLUG, HOUSING, 10P
to		
CN120	1-509-982-00	CONTACT, FEMALE
⚠LPF1	**1-231-483-00**	**FILTER, NOISE**
⚠M1	**1-541-121-00**	**MOTOR, FAN**
Q1	**8-729-311-62**	**TRANSISTOR, 2SC1116**
Q2	**8-729-311-62**	**TRANSISTOR, 2SC1116**
Q3	**8-729-374-72**	**TRANSISTOR, 2SA747A**
Q4	**8-729-374-72**	**TRANSISTOR, 2SA747A**
Q5	**8-729-311-62**	**TRANSISTOR, 2SC1116**
Q6	**8-729-374-72**	**TRANSISTOR, 2SA747A**
⚠R1	**1-214-789-00**	**RES. METAL 0.1 10% 5W**
⚠R2	**1-214-789-00**	**RES. METAL 0.1 10% 5W**
⚠R3	**1-214-789-00**	**RES. METAL 0.1 10% 5W**
⚠R4	**1-214-789-00**	**RES. METAL 0.1 10% 5W**
⚠R5	**1-217-156-00**	**RES. METAL 0.22 10% 5W**
⚠R6	**1-217-156-00**	**RES. METAL 0.22 10% 5W**
⚠SW1	**1-516-379-00**	**SWITCH, ROCKER**
SW2	**1-552-078-00**	**SWITCH, SLIDE**
⚠T1	1-446-349-00	TRANSFORMER, POWER

PACKING MATERIAL AND ACCESSORY (SUPPLIED)

	A-6252-032-A	**EXTENSION BOARD, EB-4**
	2-252-662-00	TERMINAL, TP
CN1	**1-508-892-00**	**CONNECTOR, PCB, 10P**
D1–D4	**8-719-812-41**	**DIODE, TLR124, LED, RED**
R1, R2	**1-246-473-00**	**RES. CARBON 1K 5% 1/4W**
R3, R4	**1-246-465-00**	**RES. CARBON 470 5% 1/4W**
	X-3659-901-0	ANGLE ASS'Y, RACK
	2-249-307-00	**INDICATOR, REMOTE**
	3-659-926-00	CUSHION, SIDE
	3-659-927-00	CARTON, INDIVIDUAL
	3-659-951-00	CUSHION, MAIN
	3-701-613-00	**BAG, POLY (FOR SCREWS)**
	3-701-630-00	**BAG, POLY (FOR MANUAL)**
	3-701-649-00	**BAG, POLY (FOR BVT-D0)**

Ref. No.	Part No.	Description
FIXTURE (OPTIONAL)		
	J-6041-590-A	**30P FLAT CABLE (FOR MY-4, MY-5 BOARDS)**
	J-6041-720-A	**40P EXTENSION CABLE ASS'Y (FOR BE-1 BOARD)**
	J-6041-770-A	**IC TEST CLIP, TC-16**
	J-6041-780-A	**IC TEST CLIP, TC-20**
	Manufacturer; AP Products Incorporated BOX 697 72 Corwin Drive Painesville, Ohio 44077, USA TEL: 216-354-2101	
	J-6042-440-A	**COMPLETE PCB, MD-8 ADJ BOARD** (SECAM ONLY)
	(Including the following components)	
1pc	2-251-622-00	LEVER, PC BOARD, WITH PIN
2pcs	7-621-912-20	SCREW, TOTSU B2.6x5
BPF1	**1-231-468-00**	**FILTER, BANDPASS 4.28MHz**
C1	**1-131-441-00**	**CAP, TANTALUM 22 10% 16V**
C2	**1-101-005-00**	**CAP, CERAMIC 0.022 50V**
C3	**1-131-441-00**	**CAP, TANTALUM 22 10% 16V**
C4	**1-101-005-00**	**CAP, CERAMIC 0.022 50V**
C5	**1-131-441-00**	**CAP, TANTALUM 22 10% 16V**
C6	**1-101-005-00**	**CAP, CERAMIC 0.022 50V**
C7	**1-131-441-00**	**CAP, TANTALUM 22 10% 16V**
C8	**1-101-005-00**	**CAP, CERAMIC 0.022 50V**
C9	**1-108-603-00**	**CAP, MYLAR 0.1 5% 50V**
C10, 11	**1-123-307-00**	**CAP, ELECT 100 10V**
C12	**1-131-441-00**	**CAP, TANTALUM 22 10% 16V**
C13	**1-109-557-00**	**CAP, MICA 680PF 5% 100V**
C14	**1-109-563-00**	**CAP, MICA 0.0012 5% 100V**
C15	**1-131-441-00**	**CAP, TANTALUM 22 10% 16V**
C16	**1-108-603-00**	**CAP, MYLAR 0.1 5% 50V**
C17	**1-107-159-00**	**CAP, MICA 33PF 5% 500V**
C18	**1-101-005-00**	**CAP, CERAMIC 0.022 50V**
C19	**1-109-554-00**	**CAP, MICA 510PF 5% 100V**
CN1	**1-508-892-00**	**CONNECTOR PCB, 100P**
D1	**8-719-162-07**	**DIODE RD6.2E**
RB1 to 4	**1-535-178-00**	**FERRITE BEAD**
IC1, 2	**8-749-936-51**	**IC BX365A; SONY**
IC3	**8-759-930-54**	**IC CA3054; RCA**
IC4	**8-759-902-21**	**IC SN74LS221N, TTL; TI**
IC5	**8-759-900-74**	**IC SN74LS74AN, TTL; TI**

Ref. No.	Part No.	Description
L1	**1-407-157-XX**	**INDUCTOR, MICRO 10 5%**
LV1	**1-407-567-00**	**INDUCTOR, VAR 4.7**
Q1, 2, 3	**8-724-375-01**	**TRANSISTOR 2SC403C**
Q4, 5	**8-729-384-48**	**TRANSISTOR 2SA844**
R1	**1-214-105-00**	**RES, METAL 75 1/4W 1%**
R2	**1-214-100-00**	**RES, METAL 47 1/4W 1%**
R3	**1-214-136-00**	**RES, METAL 1500 1/4W 1%**
R4	**1-214-106-00**	**RES, METAL 82 1/4W 1%**
R5	**1-214-132-00**	**RES, METAL 1K 1/4W 1%**
R6	**1-214-164-00**	**RES, METAL 22K 1/4W 1%**
R7, 8	**1-214-125-00**	**RES, METAL 510 1/4W 1%**
R9	**1-214-100-00**	**RES, METAL 47 1/4W 1%**
R10	**1-214-139-00**	**RES, METAL 2K 1/4W 1%**
R11	**1-214-116-00**	**RES, METAL 220 1/4W 1%**
R12, 13	**1-214-144-00**	**RES, METAL 3300 1/4W 1%**
R14	**1-214-156-00**	**RES, METAL 10K 1/4W 1%**
R15, 16	**1-214-100-00**	**RES, METAL 47 1/4W 1%**
R17	**1-214-156-00**	**RES, METAL 10K 1/4W 1%**
R18, 19	**1-214-132-00**	**RES, METAL 1K 1/4W 1%**
R20	**1-214-108-00**	**RES, METAL 100 1/4W 1%**
R21	**1-214-127-00**	**RES, METAL 620 1/4W 1%**
R22, 23	**1-214-132-00**	**RES, METAL 1K 1/4W 1%**
R24	**1-214-136-00**	**RES, METAL 1500 1/4W 1%**
R25	**1-214-105-00**	**RES, METAL 75 1/4W 1%**
R27	**1-214-148-00**	**RES, METAL 4700 1/4W 1%**
R28	**1-214-160-00**	**RES, METAL 15K 1/4W 1%**
R29, 30	**1-214-144-00**	**RES' METAL 3300 1/4W 1%**
R31	**1-214-156-00**	**RES, METAL 10K 1/4W 1%**
R32	**1-214-140-00**	**RES, METAL 2200 1/4W 1%**
R33, 34	**1-214-120-00**	**RES, METAL 330 1/4W 1%**
TP1 to 3	2-252-662-00	TERMINAL, TP
TPE1, 2	2-252-662-11	TERMINAL, TP

UP TO #10200 (PAL) UP TO #10200 (SECAM)			#10201 & UP (PAL) #10201 & UP (SECAM)	
AP-1 BOARD (PAL)				
C99	1-107-105-00	CAP, MICA 8±1PF 50V	1-107-102-00	CAP, MICA 5±1PF 50V
R15	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-168-00	RES, METAL 33K 1/4W 1%
TP12, 13	NOT IN USE		2-252-662-00	TERMINAL, TP
DC-5 BOARD (PAL)				
C87	NOT IN USE		1-108-567-00	CAP, MYLAR 0.0033 5% 50V
IC3	8-759-906-07	IC TL607CP; TI	8-759-906-01	IC TL601CP; TI
IC8	8-759-906-07	IC TL607CP; TI	8-759-906-01	IC TL601CP; TI
VR4	1-224-931-00	RES, VAR, METAL 20K	1-226-015-00	RES, VAR, METAL 20K
DM-15 BOARD (SECAM)				
IC19	8-759-906-07	IC TL607CP; TI	8-759-906-01	IC TL601CP; TI
PW-43 BOARD				
VR1	1-224-938-00	RES, VAR, METAL 2K	1-224-928-00	RES, VAR, METAL 2K
VR2	1-224-937-00	RES, VAR, METAL 1K	1-224-927-00	RES, VAR, METAL 1K
VR3	1-224-937-00	RES, VAR, METAL 1K	1-224-927-00	RES, VAR, METAL 1K
VR4	1-224-938-00	RES, VAR, METAL 2K	1-224-928-00	RES, VAR, METAL 2K
SG-21 BOARD (PAL)				
VL1	1-407-570-00	COIL, VAR 15	1-407-571-00	COIL, VAR 22
UI-3 BOARD (PAL)				
IC24	8-759-906-07	IC TL607CP; TI	8-759-906-01	IC TL601CP; TI

UP TO #10300 (PAL) UP TO #10200 (SECAM)			#10301 & UP (PAL) #10201 & UP (SECAM)	
AD-7 BOARD				
R59 (SECAM)	1-214-139-00	RES, METAL 2K 1/4W 1%	DELETED	
R60 (PAL)	1-214-148-00	RES, METAL 4.7K 1/4W 1%	DELETED	
AP-1 BOARD (PAL)				
C103	NOT IN USE		1-121-806-00	CAP, ELECT, NONPOLAR 10 16V
R50	1-214-101-00	RES, METAL 51 1/4W 1%	1-214-142-00	RES, METAL 2.7K 1/4W 1%
R51	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-144-00	RES, METAL 3.3K 1/4W 1%
VR3	1-224-937-00	RES, VAR, METAL 1K	1-224-939-00	RES, VAR, METAL 5K
DA-4 BOARD (SECAM)				
C57	1-109-527-00	CAP, MICA 47PF 5% 100V	1-109-528-00	CAP, MICA 51PF 5% 100V
C58	1-109-527-00	CAP, MICA 47PF 5% 100V	1-109-528-00	CAP, MICA 51PF 5% 100V
C59	1-109-527-00	CAP, MICA 47PF 5% 100V	1-109-528-00	CAP, MICA 51PF 5% 100V
DA-5 BOARD (PAL)				
C3	1-109-527-00	CAP, MICA 47PF 5% 100V	1-109-528-00	CAP, MICA 51PF 5% 100V
C4	1-109-527-00	CAP, MICA 47PF 5% 100V	1-109-528-00	CAP, MICA 51PF 5% 100V
C9	1-109-527-00	CAP, MICA 47PF 5% 100V	1-109-528-00	CAP, MICA 51PF 5% 100V
R8	1-214-153-00	RES, METAL 7.5K 1/4W 1%	1-214-155-00	RES, METAL 9.1K 1/4W 1%
R11	1-214-153-00	RES, METAL 7.5K 1/4W 1%	1-214-155-00	RES, METAL 9.1K 1/4W 1%
IO-3 BOARD				
R120	NOT IN USE		1-214-108-00	RES, METAL 100 1/4W 1%
MY-4 BOARD				
ICG1 to ICG4 ICH1 to ICH4	8-759-901-66	IC SN74LS166N, TTL; TI	8-759-941-66	IC SN74166N, TTL; TI
UI-4 BOARD (SECAM)				
IC17	8-759-906-07	IC TL607CP; TI	8-759-906-01	IC TL601CP; TI
IC23	8-759-906-07	IC TL607CP; TI	8-759-906-01	IC TL601CP; TI

UP TO #10400 (PAL) UP TO #10300 (SECAM)			#10401 & UP (PAL) #10301 & UP (SECAM)	
AP-1 BOARD				
(PAL)				
C49	1-109-562-00	CAP, MICA 0.0011 5% 100V	1-109-553-00	CAP, MICA 470PF 5% 100V
C50	1-109-562-00	CAP, MICA 0.0011 5% 100V	1-109-553-00	CAP, MICA 470PF 5% 100V
C56	1-161-670-00	CAP, CERAMIC 0.022 50V	1-131-215-00	CAP, TANTALUM 1 10% 35V
C59	1-161-670-00	CAP, CERAMIC 0.022 50V	1-131-215-00	CAP, TANTALUM 1 10% 35V
C103	1-121-806-00	CAP, ELECT, NONPOLAR 10 16V	DELETED	
IC21	8-759-145-57	IC μPC4557C; NEC	8-759-990-82	IC TL082CP; TI
R39	1-214-108-00	RES, METAL 100 1/4W 1%	1-214-120-00	RES, METAL 330 1/4W 1%
R44	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-144-00	RES, METAL 3.3K 1/4W 1%
R45	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-144-00	RES, METAL 3.3K 1/4W 1%
R50	1-214-142-00	RES, METAL 10K 2.7K 1/4W 1%	1-214-101-00	RES, METAL 51 1/4W 1%
R51	1-214-144-00	RES, METAL 3.3K 1/4W 1%	1-214-156-00	RES, METAL 10K 1/4W 1%
R93	NOT IN USE		1-214-108-00	RES, METAL 100 1/4W 1%
R94	NOT IN USE		1-214-108-00	RES, METAL 100 1/4W 1%
VR3	1-224-939-00	RES, VAR, METAL 5K	1-224-935-00	RES, VAR, METAL 200

UP TO #10599 (PAL) UP TO #10399 (SECAM)		#10601 & UP (PAL) #10401 & UP (SECAM)	
BE-1 BOARD			
(PAL)			
	NOT IN USE	A-6257-066-A	BE-1 BOARD, COMPLETE
RI-3 BOARD			
A-6265-031-A	RI-3 BOARD, COMPLETE	DELETED; PAL NOT DELETED; SECAM	
ST-10 (P) BOARD			
(PAL)			
C14	NOT IN USE	1-109-542-00	CAP, MICA 220PF 5% 100V
C15	NOT IN USE	1-109-535-00	CAP, MICA 100PF 5% 100V

UP TO #10699 (PAL) UP TO #10399 (SECAM)		#10701 & UP (PAL) # 10401 & UP (SECAM)	
MY-4 BOARD			
ICA1 to ICA4 ICE1 to ICE4 ICJ1 to ICJ4 ICN1 to ICN4	8-759-672-23 IC M58722P-3, NMOS (2111A-2; INTEL) M58722P-3 and M5L2111AP-2 are equivalent.	8-759-672-22	IC M5L2111AP-2, NMOS (2111A-2; INTEL)
MY-5 BOARD			
ICE1 ICF1 to ICF4 ICG2 to ICG4	8-759-672-23 IC M58722P-3, NMOS (2111A-2; INTEL) M58722P-3 and M5L2111AP-2 are equivalent.	8-759-672-22	IC M5L2111AP-2, NMOS (2111A-2; INTEL)

UP TO #10899 (PAL) UP TO #10599 (SECAM)			#10901 & UP (PAL) #10601 & UP (SECAM)	
AP-1 BOARD				
(PAL)				
VR3	1-224-935-00	RES, VAR, METAL 200	1-224-937-00	RES, VAR, METAL 1K

UP TO #11099 (PAL) UP TO #10599 (SECAM)			#11101 & UP (PAL) #10601 & UP (SECAM)	
AC-17 BOARD				
---	1-588-082-00	PC BOARD, AC-17	1-588-082-12	PC BOARD, AC-17
Note: 1-588-082-00 and 1-588-082-12 are not interchangeable.				
CB1	1-532-543-00	CIRCUIT BREAKER, AC250V 3.15A	1-532-533-00	CIRCUIT BREAKER, AC250V 5A
CB2	1-532-543-00	CIRCUIT BREAKER, AC250V 3.15A	1-532-542-00	CIRCUIT BREAKER, AC250V 2.5A
BE-1 BOARD				
(PAL)				
TPE1	2-252-662-00	TERMINAL, TP	DELETED	
DC-5 BOARD				
(PAL)				
R75	1-214-163-00	RES, METAL 20K 1/4W 1%	1-214-165-00	RES, METAL 24K 1/4W 1%
IO-3 BOARD				
TPE1	2-252-662-00	TERMINAL, TP	DELETED	
MD-8 BOARD				
(SECAM)				
R117	NOT IN USE		1-214-172-00	RES, METAL 47K 1/4W 1%
ST-10 BOARD				
---	A-6265-028-A	ST-10(P) BOARD, COMPLETE	A-6265-028-B	ST-10(P) BOARD, COMPLETE
---	A-6265-030-A	ST-10(S) BOARD, COMPLETE	A-6265-030-B	ST-10(S) BOARD, COMPLETE

UP TO #11299 (PAL) UP TO #10699 (SECAM)			#11301 & UP (PAL) #10701 & UP (SECAM)	
DA-5 BOARD (PAL)				
VR5	1-224-938-00	RES, VAR, METAL 2K	1-224-939-00	RES, VAR, METAL 5K
DC-5 BOARD (PAL)				
R95	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-160-00	RES, METAL 15K 1/4W 1%
R116	NOT IN USE		1-247-053-00	RES, CARBON 1M 1/8W 5%
MB-7 BOARD (PAL)				
---	A-6265-026-A	MB-7 BOARD, COMPLETE	A-6265-026-B	MB-7 BOARD, COMPLETE

UP TO # 11399 (PAL) UP TO # 10699 (SECAM)			# 11401 & UP (PAL) # 10701 & UP (SECAM)	
DA-4 BOARD (SECAM)				
VR1	1-224-938-00	RES, VAR, METAL 2K	1-224-939-00	RES, VAR, METAL 5K
DA-5 BOARD (PAL)				
R110	1-214-151-00	RES, METAL 6.2K 1/4W 1%	1-214-163-00	RES, METAL 20K 1/4W 1%

UP TO # 11499 (PAL) UP TO # 10799 (SECAM)			# 11501 & UP (PAL) # 10801 & UP (SECAM)	
AP-1 BOARD (PAL)				
R39	1-214-120-00	RES, METAL 330 1/4W 1%	1-214-116-00	RES, METAL 220 1/4W 1%
DO-10 BOARD				
R37	1-214-152-00	RES, METAL 6.8K 1/4W 1%	1-214-150-00	RES, METAL 5.6K 1/4W 1%
SG-20 BOARD (SECAM)				
C1	1-131-191-00	CAP, TANTALUM 47 10% 6.3V	1-123-308-00	CAP, ELECT 220 10V
C2	1-131-191-00	CAP, TANTALUM 47 10% 6.3V	1-123-308-00	CAP, ELECT 220 10V
R1	1-214-105-00	RES, METAL 75 1/4W 1%	1-214-106-00	RES, METAL 82 1/4W 1%
R2	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-132-00	RES, METAL 1K 1/4W 1%
R96	1-246-533-00	RES, CARBON 330K 1/4W 5%	1-214-164-00	RES, METAL 22K 1/4W 1%
SG-21 BOARD (PAL)				
C1	1-131-191-00	CAP, TANTALUM 47 10% 6.3V	1-123-308-00	CAP, ELECT 220 10V
C2	1-131-191-00	CAP, TANTALUM 47 10% 6.3V	1-123-308-00	CAP, ELECT 220 10V
R1	1-214-105-00	RES, METAL 75 1/4W 1%	1-214-106-00	RES, METAL 82 1/4W 1%
R2	1-246-533-00	RES, CARBON 330K 1/4W 5%	1-214-164-00	RES, METAL 22K 1/4W 1%
R3	1-214-156-00	RES, METAL 10K 1/4W 1%	1-214-132-00	RES, METAL 1K 1/4W 1%

UP TO # 11599 (PAL) UP TO # 10899 (SECAM)			# 11601 & UP (PAL) # 10901 & UP (SECAM)	
EN-7 BOARD (PAL)				
R22	1-214-116-00	RES, METAL 220 1/4W 1%	1-214-123-00	RES, METAL 430 1/4W 1%
R49	1-214-116-00	RES, METAL 220 1/4W 1%	1-214-123-00	RES, METAL 430 1/4W 1%

UP TO # 11699 (PAL) UP TO # 10999 (SECAM)			# 11701 & UP (PAL) # 11001 & UP (SECAM)	
AD-6 BOARD				
R22	1-214-655-00	RES, METAL 3.2K 1/8W 0.25%	1-214-143-00	RES, METAL 3K 1/4W 1%
R24	1-214-656-00	RES, METAL 6.4K 1/8W 0.25%	1-214-151-00	RES, METAL 6.2K 1/4W 1%
R25	1-214-652-00	RES, METAL 793.6 1/8W 0.1%	1-214-129-00	RES, METAL 750 1/4W 1%
R27	1-214-337-00	RES, METAL 1.6K 1/8W 0.1%	1-214-136-00	RES, METAL 1.5K 1/4W 1%
R75	1-214-655-00	RES, METAL 3.2K 1/8W 0.25%	1-214-143-00	RES, METAL 3K 1/4W 1%
R77	1-214-656-00	RES, METAL 6.4K 1/8W 0.25%	1-214-151-00	RES, METAL 6.2K 1/4W 1%
R78	1-214-652-00	RES, METAL 793.6 1/8W 0.1%	1-214-129-00	RES, METAL 750 1/4W 1%
R80	1-214-337-00	RES, METAL 1.6K 1/8W 0.1%	1-214-136-00	RES, METAL 1.5K 1/4W 1%
VR6	NOT IN USE		1-224-936-00	RES, VAR, METAL 500
VR7	NOT IN USE		1-224-936-00	RES, VAR, METAL 500
VR8	NOT IN USE		1-224-934-00	RES, VAR, METAL 100
VR9	NOT IN USE		1-224-935-00	RES, VAR, METAL 200
VR10	NOT IN USE		1-224-936-00	RES, VAR, METAL 500
VR11	NOT IN USE		1-224-936-00	RES, VAR, METAL 500
VR12	NOT IN USE		1-224-934-00	RES, VAR, METAL 100
VR13	NOT IN USE		1-224-935-00	RES, VAR, METAL 200
AD-7 BOARD				
R14	1-214-655-00	RES, METAL 3.2K 1/8W 0.25%	1-214-143-00	RES, METAL 3K 1/4W 1%
R16	1-214-656-00	RES, METAL 6.4K 1/8W 0.25%	1-214-151-00	RES, METAL 6.2K 1/4W 1%
R17	1-214-652-00	RES, METAL 793.6 1/8W 0.1%	1-214-129-00	RES, METAL 750 1/4W 1%
R19	1-214-337-00	RES, METAL 1.6K 1/8W 0.1%	1-214-136-00	RES, METAL 1.5K 1/4W 1%
VR3	NOT IN USE		1-224-936-00	RES, VAR, METAL 500
VR4	NOT IN USE		1-224-936-00	RES, VAR, METAL 500
VR5	NOT IN USE		1-224-934-00	RES, VAR, METAL 100
VR6	NOT IN USE		1-224-935-00	RES, VAR, METAL 200

UP TO #11799 (PAL) UP TO #11099 (SECAM)			#11801 & UP (PAL) #11101 & UP (SECAM)	
SS-12 BOARD				
D3	8-719-815-55	DIODE 1S1555	8-719-133-07	DIODE RD3.3E-B

UP TO #11999 (PAL) UP TO #11099 (SECAM)			#12001 & UP (PAL) #11101 & UP (SECAM)	
AP-1 BOARD				
(PAL)				
R39	1-214-116-00	RES, METAL 220 1/4W 1%	1-214-120-00	RES, METAL 330 1/4W 1%
SW1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE
BE-1 BOARD				
(PAL)				
S1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE
DA-4 BOARD				
(SECAM)				
SW1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE
DA-5 BOARD				
(PAL)				
SW1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE
DM-15 BOARD				
(SECAM)				
SW1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE
IO-3 BOARD				
SW1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE
MY-4 BOARD				
SW1	1-552-513-00	TOGGLE 2-2	1-553-441-00	SWITCH, TOGGLE

UP TO #12436 (PAL) UP TO #11299 (SECAM)			#12437 & UP (PAL) #11301 & UP (SECAM)	
MECHANICAL PARTS				
(PAL)				
9pcs	A-6705-004-B	KNOB ASS'Y, CONTROL	X-3661-073-0	KNOB ASS'Y, CONTROL
(SECAM)				
7pcs	A-6705-004-B	KNOB ASS'Y, CONTROL	X-3661-073-0	KNOB ASS'Y, CONTROL

UP TO #12899 (PAL)			#12901 & UP (PAL)	
SG-21 BOARD				
(PAL)				
Q13	8-729-674-84	2SC2748	8-729-658-32	2SC1583
R93	1-214-117-00	RES, METAL 240 1/4W 1%	1-214-116-00	RES, METAL 220 1/4W 1%

UP TO #12999 (PAL) UP TO #11299 (SECAM)			#13001 & UP (PAL) #11301 & UP (SECAM)	
IO-3 BOARD				
C101	NOT IN USE		1-107-068-00	CAP, MICA 20PF 5% 50V

UP TO #13099 (PAL) UP TO #11399 (SECAM)			#13101 & UP (PAL) #11401 & UP (SECAM)	
DA-5 BOARD				
(PAL)				
C44	1-161-670-00	CAP, CERAMIC 0.22 50V	1-131-215-00	CAP, TANTALUM 1 10% 35V
EN-7 BOARD				
(PAL)				
R98	1-214-144-00	RES, METAL 3.3K 1/4W 1%	DELETED	
IO-3 BOARD				
C108	NOT IN USE		1-102-978-00	CAP, CERAMIC 220PF 5% 50V
SG-21 BOARD				
(PAL)				
R101	NOT IN USE		1-247-124-00	RES, CARBON 510 1/8W 5%
R102	NOT IN USE		1-214-112-00	RES, METAL 150 1/4W 1%
MECHANICAL PARTS				
2pcs	3-648-057-00	NUT (ISO-4), U	3-680-316-00	NUT (M3), STOPPER